TESTING
No. L2264

OET 65

TEST REPORT

Product Name	CDMA/LTE Smart phone
Model Name	HUAWEI H882L,H882L,Marina,Y301-A3
FCC ID	QISH882L
Client	Huawei Technologies Co., Ltd.
Manufacturer	Huawei Technologies Co., Ltd.
Date of issue	March 12, 2013

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Standard(s)	**FCC 47CFR §2.1093** Radiofrequency Radiation Exposure Evaluation: Portable Devices **ANSI C95.1, 1992:** Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.(IEEE Std C95.1-1991) **IEEE Std 1528™-2003:** IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques. **SUPPLEMENT C Edition 01-01 to OET BULLTEIN 65 Edition 97-01 June 2001 including DA 02-1438 June 19, 2002:** Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields Additional Information for Evaluation Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions. **RSS-102 Issue 4 March 2010:** Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands). **KDB 941225 D01 SAR test for 3G devices v02** SAR Measurement Procedures for 3G Devices– CDMA 2000 / Ev-Do / WCDMA / HSDPA / HSPA – **KDB 941225 D05 SAR for LTE Devices v02r01** SAR Test Considerations for LTE Handsets and Data Modems **KDB 447498 D01 Mobile Portable RF Exposure v05** Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies **KDB 648474 D04 SAR Handsets Multi Xmiter and Ant v01** SAR Evaluation Considerations for Wireless Handsets **KDB 248227 D01 SAR meas for 802 11abg v01r02** SAR measurement Procedures for 802 11a/b/g transmitters **KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01** SAR Measurement Requirements for 100 MHz to 6 GHz
Conclusion	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 7 of this test report are below limits specified in the relevant standards for the tested bands only. General Judgment: **Pass**
Comment	The test result only responds to the measured sample.

Approved by 韩伟中 Director **Revised by** 凌敏宝 SAR Manager **Performed by** 沈辰 SAR Engineer

TABLE OF CONTENT

1. General Information

1.1. Notes of the Test Report

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L2264.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

If the electrical report is inconsistent with the printed one, it should be subject to the latter.

1.2. Testing Laboratory

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1.3. Applicant Information

Company:	Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Techologies Co., Ltd., Bantian, Longgang District
City:	Shenzhen
Postal Code:	518129
Country:	P.R. China

1.4. Manufacturer Information

Company:	Huawei Technologies Co., Ltd.
Address:	Administration Building, Headquarters of Huawei Techologies Co., Ltd., Bantian, Longgang District
City:	Shenzhen
Postal Code:	518129
Country:	P.R. China

1.5. Information of EUT

General Information

Device Type:	Portable Device		
Exposure Category:	Uncontrolled Environment / General Population		
State of Sample:	Prototype Unit		
IMEI:	99000298000443		
Hardware Version:	HL1C8833LM		
Software Version:	H882L V100R001C378B160		
Antenna Type:	Internal Antenna		
Device Operating Configurations:			
Supporting Mode(s):	CDMA BC0; (tested) CDMA BC1; (tested) CDMA BC10; (tested) LTE Band 25: (tested) 802.11b/g/n HT20; (tested) Bluetooth; (tested)		
Support EVDO	Yes, Support Rev.0/A		
Support 1X Advance	Yes, Support Rev.A		
Proximity Sensor	Yes, not reduce the transmit power		
Test Modulation:	CDMA(QPSK) LTE Band (QPSK)		
LTE Category	3		
Test Channel: (Low - Middle - High)	1013 - 384 - 777 (CDMA BC0) (tested) 25 - 600 - 1175 (CDMA BC1) (tested) 476 - 580 - 684 (CDMA BC10) (tested) 26090 - 26365 – 26640 (LTE Band 25, 10MHz) (tested) 1 - 6 - 11 (802.11b/g/n HT20) (tested) 0 –39-78 (BT) (tested)		
Power Class:	CDMA BC0: 3 CDMA BC1: 2 CDMA BC10: 2 LTE Band 25: 3		
Power Control	CDMA BC0: Tested with Power Control All up bits CDMA BC1: Tested with Power Control All up bits CDMA BC10: Tested with Power Control All up bits LTE Band 25: Tested with Power Control Max.power		
Operating Frequency Range(s):	Mode	Tx (MHz)	Rx (MHz)

	CDMA BC0	824.7 ~ 848.31	869.7 ~ 893.31
	CDMA BC1	1851.25 ~ 1908.75	1931.25 ~ 1988.75
	CDMA BC10	817.9 ~ 823.1	862.9 ~ 868.1
	LTE Band 25	1851.5~1913.5	1931.5~1993.5

Auxiliary Equipment Details

AE1: Battery 1

Model:	HB4W1H
Manufacturer:	Huawei Technologies Co., Ltd.
S/N:	MAICB01X19102164

AE2: Battery 2

Model:	HB4W1H
Manufacturer:	Huawei Technologies Co., Ltd.
S/N:	MPCCA25919100430

Equipment Under Test (EUT) has a CDMA antenna that is used for Tx/Rx, the Second is LTE antenna that is used for Tx/Rx, the third is BT/WIFI antenna that is used for Tx/Rx, the fourth is BC0/BC10/GPS Diversity Antenna that is used for Rx, the Fifth is BC1/LTE Band 25 Diversity Antenna that is used for Rx. The detail about Mobile phone and Lithium Battery is in chapter 1.5 in this report.

The sample under test was selected by the Client.

Components list please refer to documents of the manufacturer.

1.6. The Maximum Reported SAR_{1g} Vaules

Head Configuration

Mode	Test Position	Channel /Frequency(MHz)	Limit SAR_{1g} 1.6 W/kg	
			Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
CDMA BC0	Left, Cheek	384/836.52	0.562	0.642
CDMA BC1	Left, Cheek	25/1851.25	1.150	1.314
CDMA BC10	Left, Cheek	580/820.5	0.547	0.608
LTE Band 25	Right, Cheek	26365/1882.5	0.812	0.965
802.11b	Right, Tilt	6/2437	0.080	0.116

Body Worn Configuration

Mode	Test Position	Channel /Frequency(MHz)	Limit SAR_{1g} 1.6 W/kg	
			Measured SAR_{1g} (W/kg)	Reported SAR_{1g} (W/kg)
CDMA BC0	Back Side	384/836.52	0.609	0.704
CDMA BC1	Back Side	600/1880	0.667	0.757
CDMA BC10	Back Side	580/820.5	0.611	0.678
LTE Band 25	Back Side	26090/1855	0.712	0.837
802.11b	Back Side	6/2437	0.093	0.134

1.7. Maximum Conducted Power of Each Tested Mode

Mode	Maximum Conducted Power (dBm)
CDMA BC0	24.13
CDMA BC1	23.99
CDMA BC10	24.06
LTE Band 25	24.00
802.11b	16.40

Note: The detail Power refers to Table 9, Table 10 and Table 11 (Power Measurement Results).

1.8. Test Date

The test performed from February 5, 2013 to March 11, 2013.

2. SAR Measurements System Configuration

2.1. SAR Measurement Set-up

The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
- The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003
- DASY5 software and SEMCAD data evaluation software.
- Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.

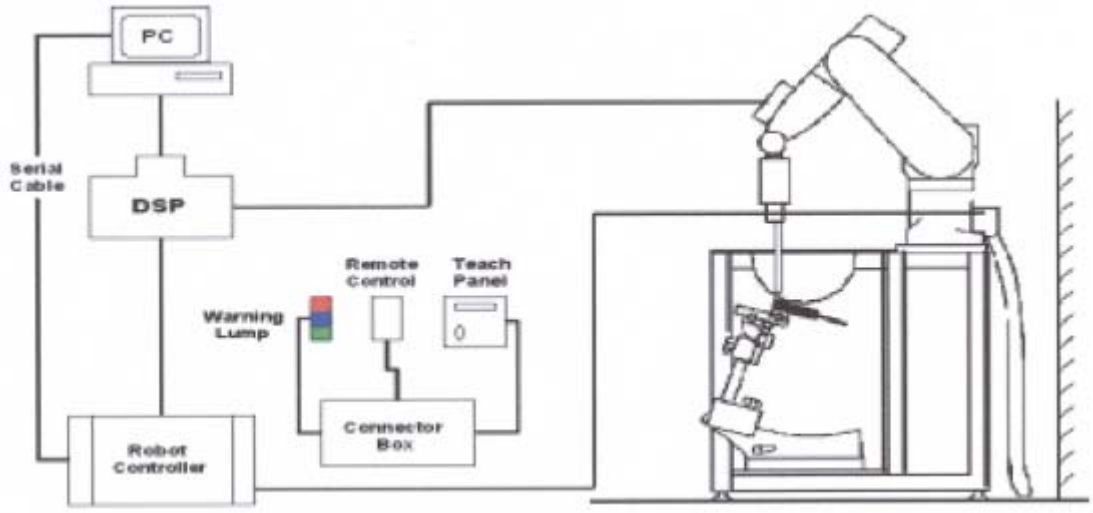

Figure 1 SAR Lab Test Measurement Set-up

2.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

2.2.1. ES3DV3 Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB (30 MHz to 4 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g Linearity: ± 0.2dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 4 GHz Dosimetry in strong gradient fields Compliance tests of mobile phones

Figure 2. ES3DV3 E-field Probe

Figure 3. ES3DV3 E-field probe

2.2.2. E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.
E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where: Δt = Exposure time (30 seconds),
C = Heat capacity of tissue (brain or muscle),
ΔT = Temperature increase due to RF exposure.
Or

$$SAR = \frac{|E|^2 \sigma}{\rho}$$

Where:
σ = Simulated tissue conductivity,
ρ = Tissue density (kg/m3).

2.3. Other Test Equipment

2.3.1. Device Holder for Transmitters

The DASY device holder is designed to cope with the die rent positions given in the standard.
It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.
The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the inference of the clamp on the test results could thus be lowered.

Figure 4 Device Holder

2.3.2. Phantom

The Generic Twin Phantom is constructed of a fiberglass shell integrated in a wooden Figure. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

Shell Thickness	2±0.1 mm
Filling Volume	Approx. 20 liters
Dimensions	810 x 1000 x 500 mm (H x L x W)
Aailable	Special

Figure 5 Generic Twin Phantom

2.4. Scanning Procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. ± 5 %.

- The “surface check” measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

- Area Scan

  The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot. Before starting the area scan a grid spacing is set according to FCC KDB Publication 865664. During scan the distance of the probe to

the phantom remains unchanged.
After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

- Zoom Scan
  After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm.

- Spatial Peak Detection
  The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses.The DASY5 system allows evaluations that combine measured data and robot positions, such as:
  • maximum search
  • extrapolation
  • boundary correction
  • peak search for averaged SAR
  During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.
  Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space. They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation.

- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

Table 1: Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01

Frequency	Maximum Area Scan Resolution (mm) (Δx_{area}, Δy_{area})	Maximum Zoom Scan Resolution (mm) (Δx_{zoom}, Δy_{zoom})	Maximum Zoom Scan Spatial Resolution (mm) $\Delta z_{zoom}(n)$	Minimum Zoom Scan Volume (mm) (x,y,z)
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≥ 22

2.5. Data Storage and Evaluation

2.5.1. Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

2.5.2. Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Normi, a_{i0}, a_{i1}, a_{i2}
	- Conversion factor	$ConvF_i$
	- Diode compression point	Dcp_i
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	
	- Density	

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot c f / d c p_i$$

With V_i = compensated signal of channel i (i = x, y, z)

U_i = input signal of channel i (i = x, y, z)

cf = crest factor of exciting field (DASY parameter)

dcp_i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With V_i = compensated signal of channel i (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i (i = x, y, z)
[mV/(V/m)^2] for E-field Probes

$ConvF$ = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_x^2 + E_Y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (E_{tot})^2 \cdot \sigma / (\rho \cdot 1000)$$

with SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

σ = conductivity in [mho/m] or [Siemens/m]

ρ = equivalent tissue density in g/cm^3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad \boldsymbol{P_{pwe} = H_{tot}^2 \cdot 37.7}$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm^2

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

3. Laboratory Environment

Table 2: The Requirements of the Ambient Conditions

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

4. Tissue-equivalent Liquid

4.1. Tissue-equivalent Liquid Ingredients

The liquid is consisted of water, salt, Glycol, Sugar, Preventol and Cellulose. The liquid has previously been proven to be suited for worst-case. The table 3 and table 4 show the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

Table 3: Composition of the Head Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Brain) 835MHz
Water	41.45
Sugar	56
Salt	1.45
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=41.5 σ=0.9

MIXTURE%	FREQUENCY(Brain) 1900MHz
Water	55.242
Glycol monobutyl	44.452
Salt	0.306
Dielectric Parameters Target Value	f=1900MHz ε=40.0 σ=1.40

MIXTURE%	FREQUENCY(Brain) 2450MHz
Water	62.7
Glycol	36.8
Salt	0.5
Dielectric Parameters Target Value	f=2450MHz ε=39.20 σ=1.80

Table 4: Composition of the Body Tissue Equivalent Matter

MIXTURE%	FREQUENCY(Body) 835MHz
Water	52.5
Sugar	45
Salt	1.4
Preventol	0.1
Cellulose	1.0
Dielectric Parameters Target Value	f=835MHz ε=55.2 σ=0.97

MIXTURE%	FREQUENCY (Body) 1900MHz
Water	69.91
Glycol monobutyl	29.96
Salt	0.13
Dielectric Parameters Target Value	f=1900MHz ε=53.3 σ=1.52

MIXTURE%	FREQUENCY(Body) 2450MHz
Water	73.2
Glycol	26.7
Salt	0.1
Dielectric Parameters Target Value	f=2450MHz ε=52.70 σ=1.95

4.2. Tissue-equivalent Liquid Properties

Table 5: Dielectric Performance of Head Tissue Simulating Liquid

Frequency	Test Date	Temp ℃	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ε_r	σ(s/m)	ε_r	σ(s/m)	Dev ε_r(%)	Dev σ(%)
835MHz (head)	2013-2-5	21.5	41.25	0.92	41.50	0.90	-0.60	2.22
1900MHz (head)	2013-2-24	21.5	39.98	1.41	40.00	1.40	-0.05	0.71
2450MHz (head)	2013-2-16	21.5	38.53	1.86	39.20	1.80	-1.71	3.33
	2013-3-11	21.5	38.57	1.86	39.20	1.80	-1.61	3.33

Table 6: Dielectric Performance of Body Tissue Simulating Liquid

Frequency	Test Date	Temp ℃	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ε_r	σ(s/m)	ε_r	σ(s/m)	Dev ε_r(%)	Dev σ(%)
835MHz (body)	2013-2-21	21.5	55.89	0.99	55.20	0.97	1.25	2.06
1900MHz (body)	2013-2-25	21.5	52.56	1.52	53.30	1.52	-1.39	0.00
2450MHz (body)	2013-2-22	21.5	51.69	1.90	52.70	1.95	-1.92	-2.56
	2013-3-11	21.5	51.61	1.91	52.70	1.95	-2.07	-2.05

5. System Check

5.1. Description of System Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulates, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the table 7 and table 8.

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %).

System check is performed regularly on all frequency bands where tests are performed with the DASY5 system.

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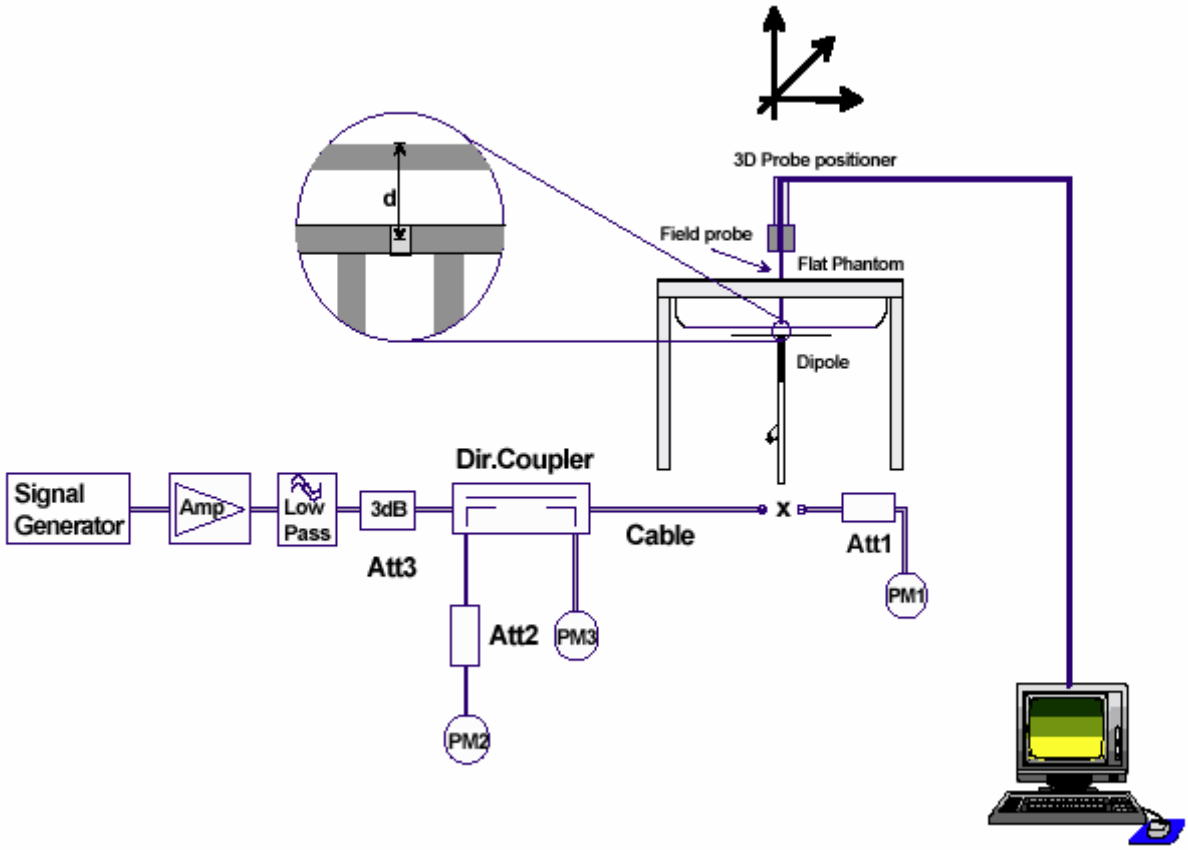


Figure 6 System Check Set-up

Justification for Extended SAR Dipole Calibrations

Usage of SAR dipoles calibrated less than 2 years ago but more than 1 year ago were confirmed in maintaining return loss (< - 20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB Publication 450824:

Dipole D835V2 SN: 4d020				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/26/2011	-27.7	/	52.9	/
8/25/2012	-29.1	5.0%	55.0	2.1Ω
Body Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/26/2011	-25.1	/	48.7	/
8/25/2012	-24.3	3.2 %	50.6	1.9Ω

Dipole D1900V2 SN: 5d060				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/31/2011	-22.3	/	52.6	/
8/30/2012	-21.7	2.7%	51.4	1.2Ω
Body Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/31/2011	-21.3	/	47.3	/
8/30/2012	-20.9	1.9%	45.9	1.4Ω

Dipole D2450V2 SN: 786				
Head Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/29/2011	-25.5	/	55	/
8/28/2012	-24.4	4.3%	53.3	1.7Ω
Body Liquid				
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	ΔΩ
8/29/2011	-29.0	/	50.4	/
8/28/2012	-28.1	3.1%	48.9	1.5Ω

5.2. System Check Results

Table 7: System Check in Head Tissue Simulating Liquid

Frequency	Test Date	Dielectric Parameters		Temp	250mW Measured SAR_{1g}	1W Normalized SAR_{1g}	1W Target SAR_{1g}	Limit (±10% Deviation)
		ε_r	σ(s/m)	(℃)	(W/kg)			
835MHz	2013-2-5	41.25	0.92	21.5	2.44	9.76	9.34	4.50%
1900MHz	2013-2-24	39.98	1.41	21.5	9.48	37.92	40.30	-5.91%
2450MHz	2013-2-16	38.53	1.86	21.5	13.70	54.80	53.80	1.86%
	2013-3-11	38.57	1.86	21.5	13.50	54.00	53.80	0.37%

Note：1. The graph results see ANNEX B.
2. Target Values used derive from the calibration certificate.

Table 8: System Check in Body Tissue Simulating Liquid

Frequency	Test Date	Dielectric Parameters		Temp	250mW Measured SAR_{1g}	1W Normalized SAR_{1g}	1W Target SAR_{1g}	Limit (±10% Deviation)
		ε_r	σ(s/m)	(℃)	(W/kg)			
835MHz	2013-2-21	55.89	0.99	21.5	2.41	9.64	9.46	1.90%
1900MHz	2013-2-25	52.56	1.52	21.5	9.93	39.72	41.70	-4.75%
2450MHz	2013-2-22	51.69	1.90	21.5	12.90	51.60	51.70	-0.19%
	2013-3-11	51.61	1.91	21.5	12.80	51.20	51.70	-0.97%

Note：1. The graph results see ANNEX B.
2. Target Values used derive from the calibration certificate.

6. Operational Conditions during Test

6.1. General Description of Test Procedures

A communication link is set up with a System Simulator (SS) by air link, and a call is established, The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with E5515C of CDMA band, CMW500 of LTE band, the EUT is set to maximum output power by E5515C and CMW500. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30 dB.

6.2. Information for the Measurement of CDMA 1x Devices

6.2.1. Output Power Verification

Test Parameter setup for maximum RF output power according to section 4.4.5 of 3GPP2

Parameter	Units	Value
I or	dBm/1.23MHz	-104
PilotE c /I or	dB	-7
TrafficE c /I or	dB	-7.4

For SAR test, the maximum power output is very important and essential; it is identical under the measurement uncertainty. It is proper to use typical Test Mode 3 (FW RC3, RVS RC3, SO55) as the worst case for SAR test.

6.2.2. Head SAR Measurement

SAR is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55.SAR for RC1 is not required because the maximum average output of each channel is less than 0.25 dB higher than that measured in RC3.Otherwise, SAR is measured on the maximum output channel in RC1 using the exposure configuration that results in the highest SAR for that channel in RC3.

6.2.3. Body SAR Measurement

SAR is measured in RC3 with the EUT configured to transmit at full rate using TDSO/SO32, transmit at full rate on FCH with all other code channels disabled. SAR for multiple code channels (FCH+SCHn) is not required when the maximum average output of each RF channel is less than 0.25dB higher than measured with FCH only.

Body SAR in RC1 is not required because the maximum average output of each channel is less than 0.25 dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output

channel in RC1; with Loopback Service Option SO55, at full rate using the body exposure configuration that results in the highest SAR for that channel in RC3.

Test communication setup meet as followings:

Communication standard between mobile station and base station simulator	3GPP2 C.S0011-B
Radio configuration	RC3（Supporting CDMA 1X）
Spreading Rate	SR1
Data Rate	9600bps
Service Options	SO55 （loop back mode）
Service Options	SO32 （test data service mode）
Multiplex Options	The mobile station does not support this service.

6.3. Handsets with Ev-Do

For handsets with Ev-Do capabilities, when the maximum average output of each channel in Rev. 0 is less than ¼ dB higher than that measured in RC3 (1x RTT), body SAR for Ev-Do is not required. Otherwise, SAR for Rev. 0 is measured on the maximum output channel, at 153.6 kbps using the body exposure configuration that results in the highest SAR for that channel in RC3. SAR for Rev. A is not required when the maximum average output of each channel is less than that measured in Rev. 0 or less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel for Rev. A using a Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations. A Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots should be configured in the downlink for both Rev. 0 and Rev. A.

6.4. Handsets with 1X Advanced

The existing CDMA2000 1x procedures in KDB pub 941225 to measure the maximum output power for 1x Advanced using SO75 with RC8 on the UL and RC11 on the DL. Smart blanking must be disa bled. Use Forward Power Control Mode 000 and 400 bps for Reverse Power Control; that is 400 kH z for both uplink and downlink power control.
Based on the maximum output power measured for 1x Advanced, apply the CDMA 2000 1x procedu res to determine SAR exclusion; that is, SAR is not required if the maximum output for 1x Advanced is no more than 0.25 dB higher than the maximum measured for 1x. However, if the reported SAR in any 1x mode exposure conditions (head, body etc.) is larger than 1.2 W/kg, repeat the highest of th ose configurations above 1.2 W/kg for each exposure condition in 1x Advanced. All reported SAR in 1x mode higher than 1.5 W/kg must be repeated for 1x Advanced, Instead of applying SO73 using v oice echo.

6.5. LTE Test Configuration

A) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the *reported* SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

The following tests were conducted according to the testrequirements outlined in section 6.2.3 of the 3GPPTS36.101 specification.For UE Power Class 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table6.2.2-1dueto higher order modulation and transmit

bandwidth configuration (resourceblocks) is specified in Table 6.2.3-1.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

6.6. Measurement Variability

Per FCC KDB Publication 865664 D01v01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:
1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.
4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

6.7. WIFI Test Configuration

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal. The Tx power is set to 16 for 802.11b mode, set to 15 for 802.11g mode, set to 13 for 802.11n mode by software. This RF signal utilized in SAR measurement has almost 100% duty cycle and its crest factor is 1.

For the 802.11b/g/n SAR tests, a communication link is set up with the test mode software for WIFI mode test. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate. Testing at higher data rates is not required when the maximum average output power is less than 0.25dB higher than those measured at the lowest data rate.

802.11b/g/n operating modes are tested independently according to the service requirements in each frequency band. 802.11b/g/n modes are tested on the maximum average output channel.

SAR is not required for 802.11g/n channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

6.8. BT Test Configuration

For BT SAR testing, BT engineering testing software installed on the DUT can provide continuous transmitting RF signal with maximum output power. And the CBT contrl the EUT operating at 2402 MHz with hoping off, and data rate set for 3DH5. This RF signal utilized in SAR measurement has Almost 100% duty cycle and its crest factor is 1.

6.9. Power Reduction operation

When power reduction is applied to certain wireless modes to satisfy SAR compliance for simultaneous transmission conditions, other equipment certification or operating requirements, include the maximum average conducted output power measured in each power reduction mode applicable to the simultaneous voice/data transmission configurations for such wireless configurations and frequency bands; and also include details of the power reduction implementation and measurement setup..

When the phone works under the SVLTE mode, the Maximum power of LTE will be determined by the power of CDMA signal.

Power Reduction operation		
Mode	Trigger condition	Reduced LTE Max Power for B25
SVLTE Mode	P<19dBm	23dBm(full power)
	21>P>=19dBm	21dBm
	23>P>=21dBm	19dBm
	P>=23dBm	17dBm

6.10. Test Positions

6.10.1. Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2003 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

6.10.2. Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. The distance between the device and the phantom was kept 15mm.

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. Per FCC KDB Publication 648474 D04_v01, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01_v05 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person’s face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

7. Test Results

7.1. Conducted Power Results

Table 9: CDMA BC0/1/10 and LTE Band 25 Conducted Power Measurement Results
Full Power

CDMA BC0		Conducted Power(dBm)		
		Channel 1013	Channel 384	Channel 777
RC3	SO55 (Loopback)	24.09	23.92	24.01
	TDSO32 (+FCH-SCH)	24.08	23.87	23.98
	TDSO32 (+SCH)	24.06	23.85	24.00
RC1	SO55 (Loopback)	24.13	23.90	23.97
	TDSO32 (+FCH-SCH)	24.08	23.87	23.90
	TDSO32 (+SCH)	24.06	23.85	23.91
1X Advance	SO75	24.01	23.75	23.96
	SO73	23.98	23.68	23.89
EVDO Rev. 0		23.97	23.87	23.95
EVDO Rev. A		23.93	23.72	23.86
CDMA BC1		**Conducted Power(dBm)**		
		Channel 25	Channel 600	Channel 1175
RC3	SO55 (Loopback)	23.92	23.94	23.96
	TDSO32 (+FCH-SCH)	23.82	23.95	23.90
	TDSO32 (+SCH)	23.86	23.99	23.84
RC1	SO55 (Loopback)	23.83	23.95	23.87
	TDSO32 (+FCH-SCH)	23.82	23.91	23.84
	TDSO32 (+SCH)	23.80	23.90	23.81
1X Advance	SO75	23.85	23.91	23.88
	SO73	23.81	23.85	23.81
EVDO Rev. 0		23.86	23.93	23.94
EVDO Rev. A		23.81	23.87	23.89
CDMA BC10		**Conducted Power(dBm)**		
		Channel 476	Channel 580	Channel 684
RC3	SO55 (Loopback)	23.97	24.04	24.02
	TDSO32 (+FCH-SCH)	23.99	24.05	24.01

	TDSO32 (+SCH)	23.93	24.06	24.03
RC1	SO55 (Loopback)	23.95	24.02	23.96
	TDSO32 (+FCH-SCH)	23.91	24.01	23.91
	TDSO32 (+SCH)	23.90	23.96	23.90
1X Advance	SO75	23.85	23.99	23.96
	SO73	23.93	23.94	23.92
EVDO Rev. 0		23.89	23.92	23.97
EVDO Rev. A		23.94	23.93	23.86

LTE Band 25				Conducted Power (dBm)		
Bandwidth	Modulation	RB	RB Start	Channel 26055	Channel 26365	Channel 26675
3MHz	QPSK	1	Low end	23.758	23.914	23.868
		1	Middle end	23.724	23.93	23.863
		1	High end	23.797	23.878	23.814
		8	Low end	22.83	22.958	22.775
		8	Middle end	22.81	22.943	22.761
		8	High end	22.792	22.876	22.782
		15	Low end	23.02	22.861	22.722
	16QAM	1	Low end	23.061	23.04	22.957
		1	Middle end	23.053	23.142	22.928
		1	High end	22.998	23.088	23.032
		8	Low end	21.777	21.929	21.883
		8	Middle end	21.79	21.93	21.87
		8	High end	21.768	21.967	21.866
		15	Low end	21.785	21.97	21.802
Bandwidth	Modulation	RB	RB Start	Channel 26065	Channel 26365	Channel 26665
5MHz	QPSK	1	Low end	23.77	23.966	23.846
		1	Middle end	23.741	23.9	23.9
		1	High end	23.776	23.807	23.866
		12	Low end	22.736	22.881	22.698
		12	Middle end	22.802	22.928	22.786
		12	High end	22.67	22.823	22.619
		25	Low end	22.664	22.8	22.63
	16QAM	1	Low end	23.77	23.966	23.846
		1	Middle end	23.741	23.9	23.9
		1	High end	23.776	23.807	23.866
		12	Low end	22.736	22.881	22.698
		12	Middle end	22.802	22.928	22.786
		12	High end	22.67	22.823	22.619
		25	Low end	22.664	22.8	22.63
Bandwidth	Modulation	RB	RB Start	Channel	Channel	Channel

				26090	26365	26640
10MHz	QPSK	1	Low end	23.998	23.952	23.883
		1	Middle end	23.83	23.863	23.78
		1	High end	23.951	23.699	23.863
		25	Low end	22.746	22.861	22.838
		25	Middle end	22.542	22.695	22.552
		25	High end	22.789	22.722	22.6
		50	Low end	22.636	22.668	22.559
	16QAM	1	Low end	22.947	23.085	22.916
		1	Middle end	22.82	22.987	22.793
		1	High end	23.015	22.786	22.889
		25	Low end	21.673	21.884	21.906
		25	Middle end	21.682	21.864	21.912
		25	High end	21.738	21.713	21.729
		50	Low end	21.585	21.689	21.627

SVLTE Power

CDMA BC0 1X		**SVLTE Band 25 (10MHz)(dBm)**							
		QPSK				**16QAM**			
Channel	output power(dBm)	1RB	1RB	25RB	50RB	1RB	1RB	25RB	50RB
		0 RB Start	49 RB Start	12 RB Start	0 RB Start	0 RB Start	49 RB Start	12 RB Start	0 RB Start
1013	15	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	16	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	17	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	18	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	19	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	19.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	21	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79
	22	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79
	23	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
	24	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
384	15	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	16	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	17	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	18	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	19	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	19.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	21	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79
	22	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79

	23	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
	24	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
777	15	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	16	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	17	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	18	23.93	23.94	22.79	22.64	22.94	22.97	22.75	21.65
	19	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	19.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	20.5	20.86	20.87	20.76	20.65	20.94	20.83	20.79	20.71
	21	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79
	22	18.92	18.79	18.86	18.85	18.93	18.79	18.96	18.79
	23	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
	24	16.73	16.83	16.79	16.79	16.73	16.89	16.89	16.73
CDMA BC1 1X		**SVLTE Band 25 (10MHz) (dBm)**							
		QPSK				**16QAM**			
Channel	output power(dBm)	1RB 0 RB Start	1RB 49 RB Start	25RB 12 RB Start	50RB 0 RB Start	1RB 0 RB Start	1RB 49 RB Start	25RB 12 RB Start	50RB 0 RB Start
25	15	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	16	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	17	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	18	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	19	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	19.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	21	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	22	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	23	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
	24	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
600	15	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	16	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	17	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	18	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	18.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	19	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	21	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	22	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	23	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
	24	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
1175	15	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59

	16	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	17	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	18	23.86	23.83	22.99	22.51	22.83	22.89	22.72	21.59
	18.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	19	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	20.5	20.96	20.83	20.83	20.79	20.98	20.85	20.71	20.81
	21	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	22	18.83	18.92	18.76	18.89	18.89	18.85	18.89	18.85
	23	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
	24	16.86	16.94	16.89	16.88	16.91	16.89	16.97	16.89
CDMA BC10 1X		**SVLTE Band 25 (10MHz) (dBm)**							
		QPSK				**16QAM**			
Channel	output power (dBm)	1RB 0 RB Start	1RB 49 RB Start	25RB 12 RB Start	50RB 0 RB Start	1RB 0 RB Start	1RB 49 RB Start	25RB 12 RB Start	50RB 0 RB Start
476	15	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	16	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	17	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	18	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	18.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	19	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	21	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	22	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	23	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83
	24	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83
580	15	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	16	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	17	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	18	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	18.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	19	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	21	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	22	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	23	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83
	24	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83
684	15	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	16	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	17	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69
	18	23.97	23.99	22.84	22.59	22.97	22.87	22.75	21.69

	18.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	19	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	20.5	20.86	20.89	20.84	20.77	20.94	20.83	20.79	20.79
	21	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	22	18.72	18.86	18.83	18.84	18.87	18.89	18.76	18.74
	23	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83
	24	16.76	16.82	16.79	16.89	16.93	16.84	16.91	16.83

CDMA Additional conducted power (change the NV to 21dBm)

CDMA BC0	**Conducted Power(dBm)**		
	Channel 1013	Channel 384	Channel 777
1X RTT	21.01	21	20.89
CDMA BC1	**Conducted Power(dBm)**		
	Channel 25	Channel 600	Channel 1175
1X RTT	20.96	21	21.03
CDMA BC10	**Conducted Power(dBm)**		
	Channel 476	Channel 580	Channel 684
1X RTT	20.88	21	21.01

LTE Additional conducted power (change the NV to 19dBm)

LTE Band 25				**Conducted Power (dBm)**		
Bandwidth	Modulation	RB	RB Start	Channel 26055	Channel 26365	Channel 26675
3MHz	QPSK	1	Low end	18.388	18.401	18.45
		1	Middle end	18.362	18.375	18.577
		1	High end	18.375	18.447	18.576
		8	Low end	17.287	17.43	17.669
		8	Middle end	17.302	17.432	17.456
		8	High end	17.397	17.47	17.517
		15	Low end	17.389	17.4	17.689
	16QAM	1	Low end	17.378	17.423	17.531
		1	Middle end	17.351	17.363	17.554
		1	High end	17.345	17.503	17.589
		8	Low end	16.315	16.54	16.642
		8	Middle end	16.342	16.552	16.688
		8	High end	16.321	16.574	16.639
		15	Low end	16.35	16.377	16.738
Bandwidth	Modulation	RB	RB Start	Channel 26065	Channel 26365	Channel 26665
5MHz	QPSK	1	Low end	18.521	18.55	18.25

		1	Middle end	18.325	18.357	18.61
		1	High end	18.201	18.311	18.444
		12	Low end	17.341	17.351	17.325
		12	Middle end	17.322	17.333	17.468
		12	High end	17.31	17.37	17.555
		25	Low end	17.2	17.228	17.543
	16QAM	1	Low end	17.521	17.642	17.413
		1	Middle end	17.324	17.411	17.516
		1	High end	17.211	17.405	17.431
		12	Low end	16.311	16.428	16.433
		12	Middle end	16.305	16.416	16.512
		12	High end	16.289	16.375	16.654
		25	Low end	16.275	16.389	16.555
Bandwidth	Modulation	RB	RB Start	Channel 26090	Channel 26365	Channel 26640
10MHz	QPSK	1	Low end	18.223	18.97	18.453
		1	Middle end	18.4	18.366	18.418
		1	High end	18.353	18.4	18.44
		25	Low end	17.56	18.13	17.435
		25	Middle end	17.348	17.333	17.456
		25	High end	17.365	17.326	17.543
		50	Low end	17.198	17.345	17.378
	16QAM	1	Low end	17.312	17.455	17.812
		1	Middle end	17.533	17.412	17.666
		1	High end	17.422	17.398	17.33
		25	Low end	16.285	16.55	16.488
		25	Middle end	16.512	16.435	16.434
		25	High end	16.444	16.412	16.555
		50	Low end	16.231	16.422	16.45

Table 10: BT Conducted Power Measurement Results

Average BT Power (dBm)	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz
DH5	6.34	6.15	6.11
2DH5	6.95	7.01	6.82
3DH5	7.03	6.87	6.57

Table 11: WIFI Conducted Power Measurement Results

WIFI Mode	Channel	Data rate (Mbps)	AV Power (dBm)	Peak Power (dBm)
11b	1	1	14.91	17.25
		2	14.6	17.32
		5.5	13.61	16.92
		11	13.74	17.17
	6	1	16.4	17.81
		2	16.37	17.68
		5.5	16.22	16.34
		11	15.88	17.35
	11	1	14.51	17.15
		2	14.44	17.06
		5.5	13.45	16.83
		11	13.61	17.02
11g	1	6	10.6	14.62
		9	10.39	14.59
		12	10.17	14.56
		18	9.77	14.53
		24	9.4	14.10
		36	8.8	13.00
		48	8.28	12.47
		54	8.1	12.25
	6	6	13.31	13.57
		9	13.19	13.31
		12	12.9	13.00
		18	12.54	12.95
		24	12.14	12.25
		36	11.57	11.47

		48	11.06	10.90
		54	10.87	10.88
	11	6	10.54	14.62
		9	10.32	14.55
		12	10.09	13.92
		18	9.72	13.87
		24	9.38	13.51
		36	8.72	12.62
		48	8.19	12.05
		54	7.99	11.87
11n HT20	1	MCS0	10.51	12.82
		MCS1	10.06	12.61
		MCS2	9.67	12.07
		MCS3	9.27	11.68
		MCS4	8.65	10.91
		MCS5	8.24	10.47
		MCS6	8.04	10.27
		MCS7	7.83	9.94
	6	MCS0	11.39	13.07
		MCS1	10.9	13.01
		MCS2	10.51	12.34
		MCS3	10.13	12.04
		MCS4	9.57	11.18
		MCS5	9.09	10.72
		MCS6	8.91	10.67
		MCS7	8.7	10.36
	11	MCS0	10.47	12.41
		MCS1	10	12.37
		MCS2	9.59	11.66
		MCS3	9.2	11.37
		MCS4	8.65	10.56
		MCS5	8.18	10.10
		MCS6	7.99	9.82
		MCS7	7.81	9.63

7.2. Standalone SAR Test Exclusion Considerations

Per FCC KDB 447498 D01v05, the SAR exclusion threshold for distances <50mm is defined by the following equation:

$$\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} * \sqrt{\text{Frequency (GHz)}} \leq 3.0$$

Based on the above equation, Bluetooth SAR was not required;
Head Evaluation = $[10^{(8/10)}/5] * (2.441^{1/2}) = 2.0 < 3.0$
Body Evaluation = $[10^{(8/10)}/15] * (2.441^{1/2}) = 0.7 < 3.0$

For conditions where the estimated SAR is overly conservative for certain conditions, the test lab ma y choose to perform standalone SAR measurements and use the measured SAR to determine simultaneous transmission SAR test exclusion.

Based on the above equation, WiFi SAR was required;
Head Evaluation = $[10^{(18/10)}/5]* (2.437^{1/2}) = 19.7 > 3.0$
Body Evaluation = $[10^{(18/10)}/15]* (2.437^{1/2}) = 6.6 > 3.0$

7.3. SAR Test Results

7.3.1. CDMA BC0 (CDMA)

Table 12: SAR Values [CDMA BC0 (CDMA), Full Power]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	384/836.52	SO55	1:1	24.5	23.92	0.007	0.562	1.14	0.642	Figure 15
Left/Tilt	384/836.52	SO55	1:1	24.5	23.92	0.013	0.354	1.14	0.405	Figure 16
Right/Cheek	384/836.52	SO55	1:1	24.5	23.92	-0.121	0.371	1.14	0.424	Figure 17
Right/Tilt	384/836.52	SO55	1:1	24.5	23.92	-0.055	0.335	1.14	0.383	Figure 18
Worst Case Position of Head with Battery 2										
Left/Cheek	384/836.52	SO55	1:1	24.5	23.92	0.129	0.502	1.14	0.574	Figure 19
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	384/836.52	SO32	1:1	24.5	23.87	-0.000	0.609	1.16	0.704	Figure 20
Font Side	384/836.52	SO32	1:1	24.5	23.87	-0.062	0.438	1.16	0.506	Figure 21
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	384/836.52	SO32	1:1	24.5	23.87	-0.012	0.609	1.16	0.704	Figure 22

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).
3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.
4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.
5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

Table 13: SAR Values [CDMA BC0 (CDMA), Power=21dBm]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	384/836.52	SO55	1:1	21	21	-0.017	0.271	1.00	0.271	Figure 23
Left/Tilt	384/836.52	SO55	1:1	21	21	0.062	0.140	1.00	0.140	Figure 24
Right/Cheek	384/836.52	SO55	1:1	21	21	-0.066	0.195	1.00	0.195	Figure 25
Right/Tilt	384/836.52	SO55	1:1	21	21	0.038	0.157	1.00	0.157	Figure 26
Worst Case Position of Head with Battery 2										
Left/Cheek	384/836.52	SO55	1:1	21	21	0.075	0.259	1.00	0.259	Figure 27
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	384/836.52	SO32	1:1	21	21	-0.187	0.303	1.00	0.303	Figure 28
Font Side	384/836.52	SO32	1:1	21	21	-0.001	0.218	1.00	0.218	Figure 29
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	384/836.52	SO32	1:1	21	21	-0.191	0.300	1.00	0.300	Figure 30

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

7.3.2. CDMA BC1 (CDMA)

Table 14: SAR Values [CDMA BC1 (CDMA), Full Power]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	1175/1908.75	SO55	1:1	24.5	23.96	0.082	0.940	1.13	1.064	Figure 31
	600/1880	SO55	1:1	24.5	23.94	-0.005	1.040	1.14	1.183	Figure 32
	25/1851.25	SO55	1:1	24.5	23.92	-0.095	1.150	1.14	1.314	Figure 33
Left/Tilt	600/1880	SO55	1:1	24.5	23.94	-0.022	0.382	1.14	0.435	Figure 34
Right/Cheek	600/1880	SO55	1:1	24.5	23.94	0.106	0.544	1.14	0.619	Figure 35
Right/Tilt	600/1880	SO55	1:1	24.5	23.94	0.018	0.443	1.14	0.504	Figure 36
Worst Case Position of Head with Battery 1(1X Advance)										
Left/Cheek	25/1851.25	SO75	1:1	24.5	23.85	-0.064	1.030	1.16	1.196	Figure 37
Worst Case Position of Head with Battery 2										
Left/Cheek	25/1851.25	SO55	1:1	24.5	23.92	0.054	1.120	1.14	1.280	Figure 38
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	600/1880	SO32	1:1	24.5	23.95	-0.055	0.667	1.14	0.757	Figure 39
Font Side	600/1880	SO32	1:1	24.5	23.95	-0.126	0.642	1.14	0.729	Figure 40
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	600/1880	SO32	1:1	24.5	23.95	-0.038	0.638	1.14	0.724	Figure 41
SAR Measurement Variability(1st Repeated SAR)										
Left/Cheek	25/1851.25	SO55	1:1	24.5	23.92	-0.005	1.010	1.14	1.154	Figure 42

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

Table 15: SAR Measurement Variability Results [CDMA BC1 (CDMA), Full Power]

Test Position	Service Option	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Left/Cheek	SO55	25/1851.25	1.150	1.010	1.14	NA	NA

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

Table 16: SAR Values [CDMA BC1 (CDMA), Power=21dBm]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	600/1880	SO55	1:1	21	21	-0.059	0.522	1.00	0.522	Figure 43
Left/Tilt	600/1880	SO55	1:1	21	21	0.055	0.203	1.00	0.203	Figure 44
Right/Cheek	600/1880	SO55	1:1	21	21	0.113	0.284	1.00	0.284	Figure 45
Right/Tilt	600/1880	SO55	1:1	21	21	0.084	0.227	1.00	0.227	Figure 46
Worst Case Position of Head with Battery 2										
Left/Cheek	600/1880	SO55	1:1	21	21	-0.117	0.518	1.00	0.518	Figure 47
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	600/1880	SO32	1:1	21	21	0.110	0.319	1.00	0.319	Figure 48
Font Side	600/1880	SO32	1:1	21	21	0.001	0.279	1.00	0.279	Figure 49
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	600/1880	SO32	1:1	21	21	0.123	0.327	1.00	0.327	Figure 50

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

7.3.3. CDMA BC10 (CDMA)

Table 17: SAR Values [CDMA BC10 (CDMA), Full Power]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	580/820.5	SO55	1:1	24.5	24.04	0.163	0.547	1.11	0.608	Figure 51
Left/Tilt	580/820.5	SO55	1:1	24.5	24.04	-0.072	0.348	1.11	0.387	Figure 52
Right/Cheek	580/820.5	SO55	1:1	24.5	24.04	-0.149	0.392	1.11	0.436	Figure 53
Right/Tilt	580/820.5	SO55	1:1	24.5	24.04	-0.059	0.367	1.11	0.408	Figure 54
Worst Case Position of Head with Battery 2										
Left/Cheek	580/820.5	SO55	1:1	24.5	24.04	0.094	0.459	1.11	0.510	Figure 55
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	580/820.5	SO32	1:1	24.5	24.05	-0.021	0.606	1.11	0.672	Figure 56
Font Side	580/820.5	SO32	1:1	24.5	24.05	-0.029	0.422	1.11	0.468	Figure 57
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	580/820.5	SO32	1:1	24.5	24.05	-0.035	0.611	1.11	0.678	Figure 58

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

Table 18: SAR Values [CDMA BC10 (CDMA), Power=21dBm]

Test Position	Channel/ Frequency (MHz)	Service Option	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	580/820.5	SO55	1:1	21	21	0.025	0.253	1.00	0.253	Figure 59
Left/Tilt	580/820.5	SO55	1:1	21	21	0.166	0.139	1.00	0.139	Figure 60
Right/Cheek	580/820.5	SO55	1:1	21	21	0.000	0.178	1.00	0.178	Figure 61
Right/Tilt	580/820.5	SO55	1:1	21	21	-0.108	0.152	1.00	0.152	Figure 62
Worst Case Position of Head with Battery 2										
Left/Cheek	580/820.5	SO55	1:1	21	21	0.159	0.254	1.00	0.254	Figure 63
Test Position of Body with Battery 1(Distance 15mm)										
Back Side	580/820.5	SO32	1:1	21	21	-0.161	0.282	1.00	0.282	Figure 64
Font Side	580/820.5	SO32	1:1	21	21	0.003	0.212	1.00	0.212	Figure 65
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	580/820.5	SO32	1:1	21	21	-0.123	0.285	1.00	0.285	Figure 66

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. SAR for Rev. A/0 is not required when the maximum average output of each channel is less than that measured in 1xRTT or less than ¼ dB higher than that measured in RC3.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

7.3.4. LTE Band 25

Table 19: SAR Values [LTE Band 25(10MHz), Full Power]

Test Position	Channel/ Frequency (MHz)	RB Start	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1(1RB)										
Left/Cheek	26640/1910	Low end	1:1	24.7	23.883	-0.117	0.433	1.21	0.523	Figure 67
	26365/1882.5	Low end	1:1	24.7	23.952	-0.167	0.675	1.19	0.802	Figure 68
	26090/1855	Low end	1:1	24.7	23.998	0.002	0.574	1.18	0.675	Figure 69
Left/Tilt	26090/1855	Low end	1:1	24.7	23.998	-0.026	0.387	1.18	0.455	Figure 70
Right/Cheek	26640/1910	Low end	1:1	24.7	23.883	-0.050	0.738	1.21	0.891	Figure 71
	26365/1882.5	Low end	1:1	24.7	23.952	-0.018	0.812	1.19	0.965	Figure 72
	26090/1855	Low end	1:1	24.7	23.998	-0.131	0.748	1.18	0.879	Figure 73
Right/Tilt	26090/1855	Low end	1:1	24.7	23.998	0.054	0.447	1.18	0.525	Figure 74
Worst Case Position of Head with Battery 2(1RB)										
Right/Cheek	26365/1882.5	Low end	1:1	24.7	23.952	-0.055	0.750	1.19	0.891	Figure 75
Test Position of Body with Battery 1(1RB, Distance 15mm)										
Back Side	26640/1910	Low end	1:1	24.7	23.883	-0.009	0.666	1.21	0.804	Figure 76
	26365/1882.5	Low end	1:1	24.7	23.952	-0.051	0.698	1.19	0.829	Figure 77
	26090/1855	Low end	1:1	24.7	23.998	-0.016	0.712	1.18	0.837	Figure 78
Font Side	26090/1855	Low end	1:1	24.7	23.998	0.121	0.679	1.18	0.798	Figure 79
Worst Case Position of Body with Battery 2 (1RB, Distance 15mm)										
Back Side	26090/1855	Low end	1:1	24.7	23.998	0.059	0.680	1.18	0.799	Figure 80
Test Position of Head with Battery 1(50%RB)										
Left/Cheek	26365/1882.5	Low end	1:1	23.7	22.861	-0.023	0.584	1.21	0.708	Figure 81
Left/Tilt	26365/1882.5	Low end	1:1	23.7	22.861	0.049	0.261	1.21	0.317	Figure 82
Right/Cheek	26365/1882.5	Low end	1:1	23.7	22.861	-0.073	0.581	1.21	0.705	Figure 83
Right/Tilt	26365/1882.5	Low end	1:1	23.7	22.861	0.034	0.360	1.21	0.437	Figure 84
Test Position of Body with Battery 1(50%RB, Distance 15mm)										
Back Side	26365/1882.5	Low end	1:1	23.7	22.861	0.012	0.559	1.21	0.678	Figure 85
Front Side	26365/1882.5	Low end	1:1	23.7	22.861	-0.064	0.525	1.21	0.637	Figure 86
Test Position of Head with Battery 1(100%RB)										

Left/Cheek	26365/1882.5	Low end	1:1	23.7	22.668	-0.045	0.585	1.27	0.742	Figure 87
Left/Tilt	26365/1882.5	Low end	1:1	23.7	22.668	-0.031	0.354	1.27	0.449	Figure 88
Right/Cheek	26365/1882.5	Low end	1:1	23.7	22.668	-0.026	0.585	1.27	0.742	Figure 89
Right/Tilt	26365/1882.5	Low end	1:1	23.7	22.668	-0.007	0.371	1.27	0.471	Figure 90
Test Position of Body with Battery 1(100%RB, Distance 15mm)										
Back Side	26365/1882.5	Low end	1:1	23.7	22.668	-0.066	0.557	1.27	0.706	Figure 91
Front Side	26365/1882.5	Low end	1:1	23.7	22.668	0.152	0.543	1.27	0.689	Figure 92
SAR Measurement Variability(1st Repeated SAR)										
Right/Cheek	26365/1882.5	Low end	1:1	24.7	23.952	-0.131	0.768	1.19	0.912	Figure 93

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

Table 20: SAR Measurement Variability Results [LTE Band 25(10MHz), Full Power]

Test Position	RB Start	Channel/ Frequency (MHz)	Measured SAR (1g)	1st Repeated SAR (1g)	Ratio	2nd Repeated SAR (1g)	3rd Repeated SAR (1g)
Right/Cheek	Low end	26365/1882.5	0.812	0.768	1.06	NA	NA

Note: 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

Table 21: SAR Values [LTE Band 25(10MHz), Power=19dBm]

Test Position	Channel/ Frequency (MHz)	RB Start	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit SAR_{1g} 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1(1RB)										
Left/Cheek	26365/1882.5	Low end	1:1	19	19	-0.023	0.215	1.00	0.215	Figure 94
Left/Tilt	26365/1882.5	Low end	1:1	19	19	0.141	0.137	1.00	0.137	Figure 95
Right/Cheek	26365/1882.5	Low end	1:1	19	19	0.113	0.219	1.00	0.219	Figure 96
Right/Tilt	26365/1882.5	Low end	1:1	19	19	0.084	0.141	1.00	0.141	Figure 97
Worst Case Position of Head with Battery 2(1RB)										
Right/Cheek	26365/1882.5	Low end	1:1	19	19	0.048	0.211	1.00	0.211	Figure 98
Test Position of Body with Battery 1(1RB, Distance 15mm)										
Back Side	26090/1855	Low end	1:1	19	19	-0.171	0.256	1.00	0.256	Figure 99
Front Side	26090/1855	Low end	1:1	19	19	-0.078	0.226	1.00	0.226	Figure 100
Worst Case Position of Body with Battery 2 (1RB, Distance 15mm)										
Back Side	26090/1855	Low end	1:1	19	19	0.017	0.253	1.00	0.253	Figure 101
Test Position of Head with Battery 1(50%RB)										
Left/Cheek	26365/1882.5	Low end	1:1	19	19	0.017	0.192	1.00	0.192	Figure 102
Left/Tilt	26365/1882.5	Low end	1:1	19	19	0.144	0.119	1.00	0.119	Figure 103
Right/Cheek	26365/1882.5	Low end	1:1	19	19	0.001	0.176	1.00	0.176	Figure 104
Right/Tilt	26365/1882.5	Low end	1:1	19	19	0.141	0.112	1.00	0.112	Figure 105
Test Position of Body with Battery 1(50%RB, Distance 15mm)										
Back Side	26365/1882.5	Low end	1:1	19	19	0.120	0.192	1.00	0.192	Figure 106
Front Side	26365/1882.5	Low end	1:1	19	19	0.124	0.168	1.00	0.168	Figure 107

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).
3. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.
4. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

7.3.5. WIFI (802.11b)

Table 22: SAR Values (802.11b)

Test Position	Channel/ Frequency (MHz)	Service	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit of SAR 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	6/2437	DSSS	1:1	18	16.4	-0.009	0.018	1.45	0.026	Figure108
Left/Tilt	6/2437	DSSS	1:1	18	16.4	0.080	0.015	1.45	0.022	Figure109
Right/Cheek	6/2437	DSSS	1:1	18	16.4	0.092	0.075	1.45	0.108	Figure110
Right/Tilt	6/2437	DSSS	1:1	18	16.4	0.008	0.080	1.45	0.116	Figure111
Worst Case Position of Head with Battery 2										
Right/Tilt	6/2437	DSSS	1:1	18	16.4	-0.079	0.079	1.45	0.114	Figure112
Test position of Body with Battery 1 (Distance 15mm)										
Back Side	6/2437	DSSS	1:1	18	16.4	0.073	0.093	1.45	0.134	Figure113
Front Side	6/2437	DSSS	1:1	18	16.4	0.016	0.017	1.45	0.025	Figure114
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	6/2437	DSSS	1:1	18	16.4	-0.022	0.088	1.45	0.127	Figure115

Note: 1. The value with blue color is the maximum SAR Value of each test band.

2. Per FCC KDB Publication 447498 D01v05, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s).

3. KDB 248227-SAR is not required for 802.11g/n channels when the maximum average output power is less than ¼ dB higher than measured on the corresponding 802.11b channels.

4. Per FCC KDB Publication 648474 D04v01, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

5. Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg.

7.3.6. Bluetooth

Table 23: SAR Values (BT)

Test Position	Channel/ Frequency (MHz)	Service	Duty Cycle	Maximum Allowed Power (dBm)	Conducted Power (dBm)	Drift ± 0.21dB	Limit of SAR 1.6 W/kg			
						Drift (dB)	Measured SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)	Graph Results
Test Position of Head with Battery 1										
Left/Cheek	0/2402	FHSS	1:1	8	7.03	0.051	0.0014	1.25	0.002	Figure116
Left/Tilt	0/2402	FHSS	1:1	8	7.03	0.055	0.0006	1.25	0.001	Figure117
Right/Cheek	0/2402	FHSS	1:1	8	7.03	0.092	0.0043	1.25	0.004	Figure118
Right/Tilt	0/2402	FHSS	1:1	8	7.03	0.022	0.0037	1.25	0.005	Figure119
Worst Case Position of Head with Battery 2										
Right/Tilt	0/2402	FHSS	1:1	8	7.03	0.042	0.002	1.25	0.002	Figure120
Test position of Body with Battery 1 (Distance 15mm)										
Back Side	0/2402	FHSS	1:1	8	7.03	0.013	0.034	1.25	0.042	Figure121
Front Side	0/2402	FHSS	1:1	8	7.03	0.130	0.015	1.25	0.019	Figure122
Worst Case Position of Body with Battery 2 (Distance 15mm)										
Back Side	0/2402	FHSS	1:1	8	7.03	0.090	0.033	1.25	0.041	Figure123

Note: For conditions where the estimated SAR is overly conservative for certain conditions, the test lab may choose to perform standalone SAR measurements and use the measured SAR to determine simultaneous transmission SAR test exclusion.

7.4. Simultaneous Transmission Conditions

Air-Interface	Band (MHz)	Type	Simultaneous Transmissions	Concurrent single transmission	Voice Over Digital Transport (Data)
CDMA	BC0	VO	Yes LTE, WIFI and BT	Yes:LTE, WIFI, BT	NA
	BC1	VO			
	BC10	VO			
	EVDO	DT	Yes BT	Yes: * see note	NA
	1X Advance	VO	Yes LTE, WIFI and BT	Yes: * see note	NA
LTE	Band 25	DT	Yes CDMA, BT	Yes: * see note	NA
WIFI	2450	DT	Yes CDMA, and BT	NA	Yes
Bluetooth (BT)	2400	DT	Yes CDMA, EVDO, LTE and WIFI	NA	NA

When standalone SAR is not required to be measured per FCC KDB 447498 D01v05 4.3.2 2), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$\textbf{Estimated SAR} = \frac{\textbf{(max. power of channel, including tune-up tolerance, mW)}}{\textbf{(min. test separation distance, mm)}} \times \frac{\sqrt{\textbf{f (GHz)}}}{\textbf{7.5}}$$

Per FCC KDB 447498 D01v05 IV.C.1.iii, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6 W/kg. When the sum is greater than the SAR limit, SAR test exclusion is determined by the SAR to peak location separation ratio.

$$\textbf{Ratio} = \frac{(\textbf{SAR}_1 + \textbf{SAR}_2)^{1.5}}{\textbf{(Peak SAR Location Separation, mm)}} < 0.04$$

When the phone works under the SVLTE mode, the Maximum power of LTE will be determined by the power of CDMA signal.

Power Reduction operation		
Mode	Trigger condition	Reduced LTE Max Power for B25
SVLTE Mode	P<19dBm	23dBm(full power)
	21>P>=19dBm	21dBm
	23>P>=21dBm	19dBm
	P>=23dBm	17dBm

Base upon the power reduction, considering simultaneous SAR test as table:

Power of CDMA	Power of LTE
21dBm(controlled through NV)(>19dBm)	23dBm(full power) (>21dBm)
24dBm(full power) (>23dBm)	19(controlled through NV) (>17dBm)

CDMA (full power) & WIFI Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	WIFI	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.642	**1.314**	0.608	**0.026**	1.340
Left hand, Tilt 15 Degree	0.405	**0.435**	0.387	**0.022**	0.457
Right hand, Touch cheek	0.424	**0.619**	0.436	**0.108**	0.727
Right hand, Tilt 15 Degree	0.383	**0.504**	0.408	**0.116**	0.620
Body, Back Side	0.704	**0.757**	0.678	**0.134**	0.891
Body, Front Side	0.506	**0.729**	0.468	**0.025**	0.754

Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value.
2. MAX. ΣSAR_{1g} = Reported $SAR_{Max.WIFI}$ + Reported $SAR_{Max.CDMA}$

MAX. ΣSAR_{1g} =1.340 W/kg ＜1.6 W/kg, so the Simultaneous SAR are not required for wifi and CDMA antenna.

CDMA (full power)&BT Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	BT	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.642	**1.314**	0.608	**0.002**	1.316
Left hand, Tilt 15 Degree	0.405	**0.435**	0.387	**0.001**	0.436
Right hand, Touch cheek	0.424	**0.619**	0.436	**0.004**	0.623
Right hand, Tilt 15 Degree	0.383	**0.504**	0.408	**0.005**	0.509
Body, Back Side	0.704	**0.757**	0.678	**0.042**	0.799
Body, Front Side	0.506	**0.729**	0.468	**0.019**	0.748
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Reported $SAR_{Max.BT}$+ Reported $SAR_{Max.CDMA}$					

MAX. ΣSAR_{1g} = 1.316 W/kg <1.6 W/kg, so the Simultaneous SAR are not required for BT and CDMA antenna.

LTE (full power)&BT Mode

Reported SAR_{1g}(W/kg) / Test Position	LTE Band 25	BT	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.802	**0.002**	0.804
Left hand, Tilt 15 Degree	**0.455**	**0.001**	0.456
Right hand, Touch cheek	**0.965**	**0.004**	0.969
Right hand, Tilt 15 Degree	**0.525**	**0.005**	0.530
Body, Back Side	**0.837**	**0.042**	0.879
Body, Front Side	**0.798**	**0.019**	0.917
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Reported $SAR_{Max.BT}$+ Reported $SAR_{Max.LTE}$			

MAX. ΣSAR_{1g} = 0.969 W/kg <1.6 W/kg, so the Simultaneous SAR are not required for BT and LTE antenna.

CDMA (full power) & LTE (power=19dBm) Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	LTE Band 25	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.642	**1.314**	0.608	**0.215**	1.529
Left hand, Tilt 15 Degree	0.405	**0.435**	0.387	**0.137**	0.572
Right hand, Touch cheek	0.424	**0.619**	0.436	**0.219**	0.838
Right hand, Tilt 15 Degree	0.383	**0.504**	0.408	**0.141**	0.645
Body, Back Side	0.704	**0.757**	0.678	**0.256**	1.013
Body, Front Side	0.506	**0.729**	0.468	**0.226**	0.955
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Reported $SAR_{Max.CDMA}$ + Reported $SAR_{Max.LTE}$					

MAX. ΣSAR_{1g} =1.529 W/kg ＜1.6 W/kg, so the Simultaneous SAR are not required for CDMA and LTE antenna.

CDMA (power=21dBm) & LTE (full power) Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	LTE Band 25	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.271	**0.522**	0.253	**0.802**	1.324
Left hand, Tilt 15 Degree	0.140	**0.203**	0.139	**0.455**	0.658
Right hand, Touch cheek	0.195	**0.284**	0.178	**0.965**	1.249
Right hand, Tilt 15 Degree	0.157	**0.227**	0.152	**0.525**	0.752
Body, Back Side	0.303	**0.327**	0.285	**0.837**	1.164
Body, Front Side	0.218	**0.279**	0.212	**0.798**	1.077
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Reported $SAR_{Max.CDMA}$ + Reported $SAR_{Max.LTE}$					

MAX. ΣSAR_{1g} =1.324 W/kg ＜1.6 W/kg, so the Simultaneous SAR are not required for CDMA and LTE antenna.

CDMA (power=21dBm) & LTE (full power) &BT Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	LTE Band 25	BT	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.271	**0.522**	0.253	**0.802**	**0.002**	1.326
Left hand, Tilt 15 Degree	0.140	**0.203**	0.139	**0.455**	**0.001**	0.659
Right hand, Touch cheek	0.195	**0.284**	0.178	**0.965**	**0.004**	1.253
Right hand, Tilt 15 Degree	0.157	**0.227**	0.152	**0.525**	**0.005**	0.757
Body, Back Side	0.303	**0.327**	0.285	**0.837**	**0.042**	1.206
Body, Front Side	0.218	**0.279**	0.212	**0.798**	**0.019**	1.096
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Estimated $SAR_{Max.BT}$ + Reported $SAR_{Max.CDMA}$+ Reported $SAR_{Max.LTE}$						

CDMA (full power) & LTE (power=19dBm) &BT Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	LTE Band 25	BT	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.642	**1.314**	0.608	**0.215**	**0.002**	1.531
Left hand, Tilt 15 Degree	0.405	**0.435**	0.387	**0.137**	**0.001**	0.573
Right hand, Touch cheek	0.424	**0.619**	0.436	**0.219**	**0.004**	0.842
Right hand, Tilt 15 Degree	0.383	**0.504**	0.408	**0.141**	**0.005**	0.650
Body, Back Side	0.704	**0.757**	0.678	**0.256**	**0.042**	1.055
Body, Front Side	0.506	**0.729**	0.468	**0.226**	**0.019**	0.974
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Estimated $SAR_{Max.BT}$ + Reported $SAR_{Max.CDMA}$+ Reported $SAR_{Max.LTE}$						

MAX. ΣSAR_{1g} =1.531 W/kg <1.6 W/kg, so the Simultaneous SAR are not required for BT and CDMA and LTE antenna.

CDMA (full power) & WIFI &BT Mode

Reported SAR_{1g}(W/kg) / Test Position	CDMA BC0	CDMA BC1	CDMA BC10	WIFI	BT	MAX. Σ SAR_{1g}
Left hand, Touch cheek	0.642	**1.314**	0.608	**0.026**	**0.002**	1.342
Left hand, Tilt 15 Degree	0.405	**0.435**	0.387	**0.022**	**0.001**	0.458
Right hand, Touch cheek	0.424	**0.619**	0.436	**0.108**	**0.004**	0.731
Right hand, Tilt 15 Degree	0.383	**0.504**	0.408	**0.116**	**0.005**	0.625
Body, Back Side	0.704	**0.757**	0.678	**0.134**	**0.042**	0.933
Body, Front Side	0.506	**0.729**	0.468	**0.025**	**0.019**	0.773
Note: 1.The value with blue color is the maximum ΣSAR_{1g} Value. 2. MAX. ΣSAR_{1g} = Estimated $SAR_{Max.BT}$ + Reported $SAR_{Max.CDMA}$+ Reported $SAR_{Max.WIFI}$						

MAX. ΣSAR_{1g} =1.342 W/kg <1.6 W/kg, so the Simultaneous SAR are not required for BT and CDMA and WIFI antenna.

8. 700MHz to 3GHz Measurement Uncertainty

No.	source	Type	Uncertainty Value (%)	Probability Distribution	k	c_i	Standard ncertainty u_i' (%)	Degree of freedom V_{eff} or v_i
1	System repetivity	A	0.5	N	1	1	0.5	9
Measurement system								
2	-probe calibration	B	6.0	N	1	1	6.0	∞
3	-axial isotropy of the probe	B	4.7	R	$\sqrt{3}$	$\sqrt{0.5}$	1.9	∞
4	- Hemispherical isotropy of the probe	B	9.4	R	$\sqrt{3}$	$\sqrt{0.5}$	3.9	∞
6	-boundary effect	B	1.9	R	$\sqrt{3}$	1	1.1	∞
7	-probe linearity	B	4.7	R	$\sqrt{3}$	1	2.7	∞
8	- System detection limits	B	1.0	R	$\sqrt{3}$	1	0.6	∞
9	-readout Electronics	B	1.0	N	1	1	1.0	∞
10	-response time	B	0	R	$\sqrt{3}$	1	0	∞
11	-integration time	B	4.32	R	$\sqrt{3}$	1	2.5	∞
12	-noise	B	0	R	$\sqrt{3}$	1	0	∞
13	-RF Ambient Conditions	B	3	R	$\sqrt{3}$	1	1.73	∞
14	-Probe Positioner Mechanical Tolerance	B	0.4	R	$\sqrt{3}$	1	0.2	∞
15	-Probe Positioning with respect to Phantom Shell	B	2.9	R	$\sqrt{3}$	1	1.7	∞
16	-Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	B	3.9	R	$\sqrt{3}$	1	2.3	∞
Test sample Related								
17	-Test Sample Positioning	A	2.9	N	1	1	2.9	71
18	-Device Holder Uncertainty	A	4.1	N	1	1	4.1	5
19	-Output Power Variation - SAR drift measurement	B	5.0	R	$\sqrt{3}$	1	2.9	∞
Physical parameter								
20	-phantom	B	4.0	R	$\sqrt{3}$	1	2.3	∞

21	-liquid conductivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.64	1.8	∞
22	-liquid conductivity (measurement uncertainty)	B	2.5	N	1	0.64	1.6	9
23	-liquid permittivity (deviation from target)	B	5.0	R	$\sqrt{3}$	0.6	1.7	∞
24	-liquid permittivity (measurement uncertainty)	B	2.5	N	1	0.6	1.5	9
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{24} c_i^2 u_i^2}$					11.50	
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$		N		k=2	23.00	

9. Main Test Instruments

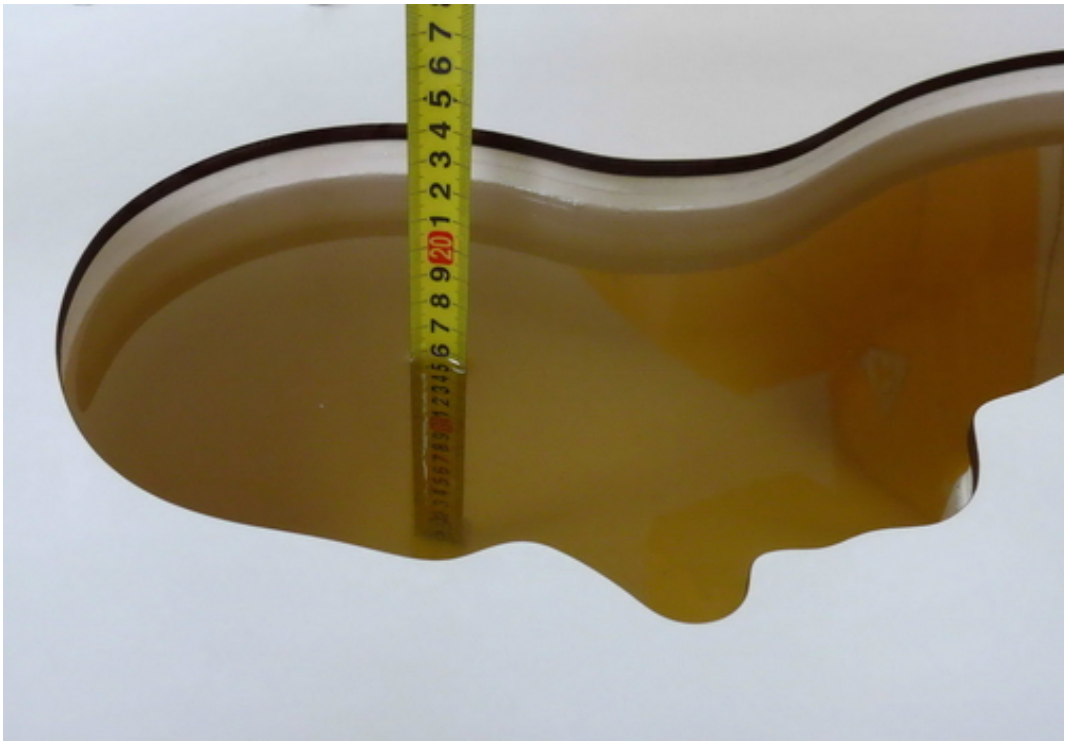
Table 24: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	Agilent 8753E	US37390326	September 11, 2012	One year
02	Dielectric Probe Kit	Agilent 85070E	US44020115	No Calibration Requested	
03	Power meter	Agilent E4417A	GB41291714	March 11, 2012	One year
04	Power sensor	Agilent N8481H	MY50350004	September 24, 2012	One year
05	Power sensor	E9327A	US40441622	January 2, 2013	One year
06	Signal Generator	HP 8341B	2730A00804	September 11, 2012	One year
07	Dual directional coupler	778D-012	50519	March 26, 2012	One year
08	Dual directional coupler	777D	50146	March 26, 2012	One year
09	Amplifier	IXA-020	0401	No Calibration Requested	
10	BTS	E5515C	MY48360988	December 1, 2012	One year
11	BTS	CMM500	113645	August 29, 2012	One year
12	BT Base Station Simulator	CBT	100271	June 30, 2012	One year
13	E-field Probe	ES3DV3	3189	June 22, 2012	One year
14	DAE	DAE4	1317	January 25, 2013	One year
15	Validation Kit 835MHz	D835V2	4d020	August 26, 2011	Two years
16	Validation Kit 1900MHz	D1900V2	5d060	August 31, 2011	Two years
17	Validation Kit 2450MHz	D2450V2	786	August 29, 2011	Two years
18	Temperature Probe	JM222	AA1009129	March 15, 2012	One year
19	Hygrothermograph	WS-1	64591	September 27, 2012	One year

*******END OF REPORT *******

ANNEX A: Test Layout

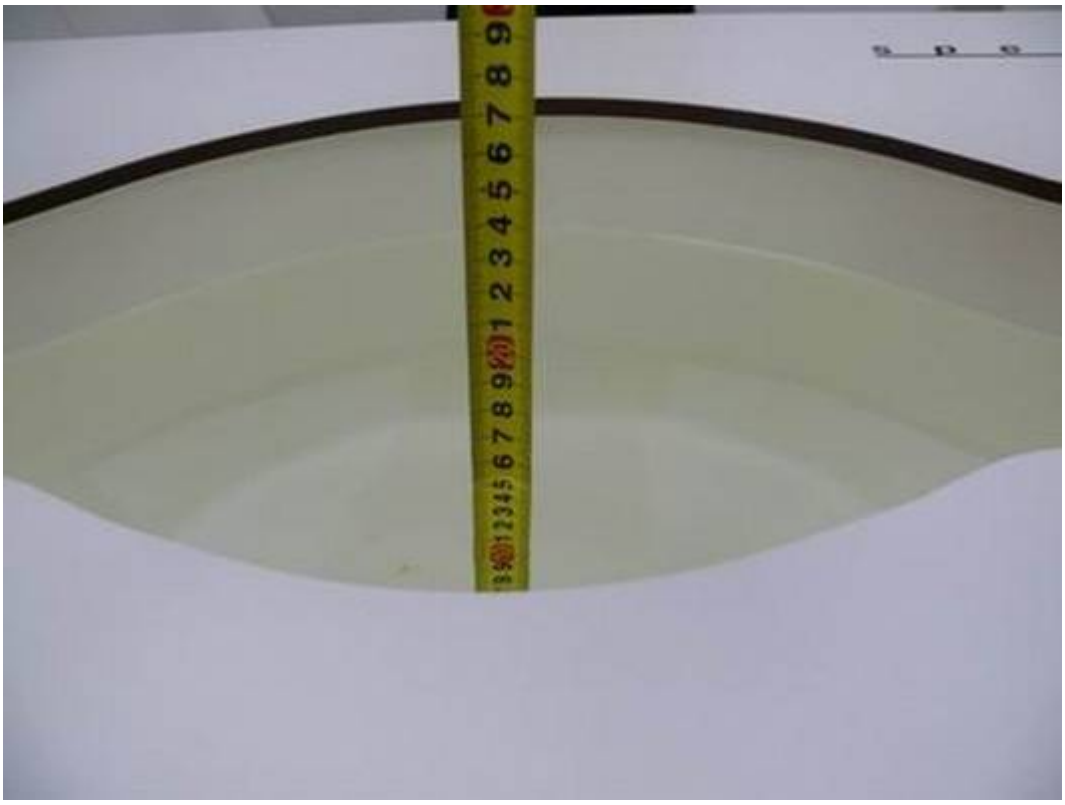
Picture 1: Specific Absorption Rate Test Layout



Picture 2: Liquid depth in the head Phantom (835MHz, 15.3cm depth)

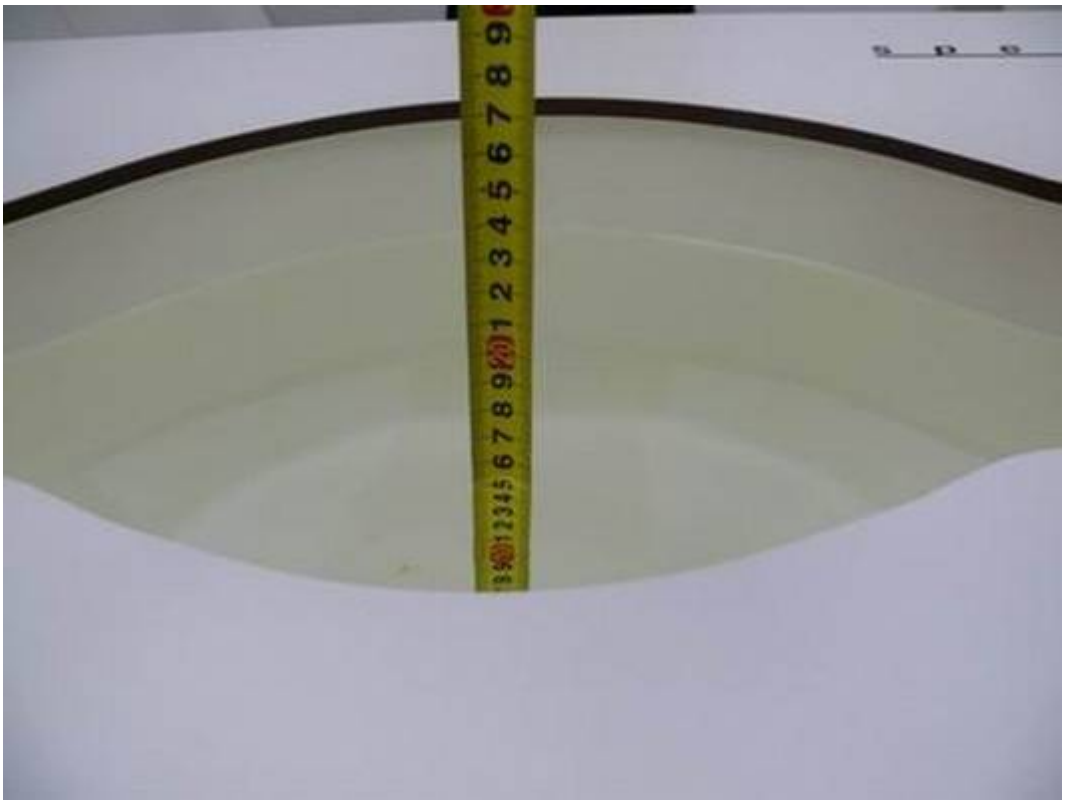
Picture 3: Liquid depth in the Flat Phantom (835 MHz, 15.4cm depth)

Picture 4: liquid depth in the head Phantom (1900 MHz, 15.2cm depth)



Picture 5: Liquid depth in the Flat Phantom (1900 MHz, 15.3cm depth)

Picture 6: liquid depth in the head Phantom (2450 MHz, 15.2cm depth)



Picture 7 : Liquid depth in the Flat Phantom (2450 MHz, 15.3cm depth)

ANNEX B: System Check Results

System Performance Check at 835 MHz Head TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date/Time: 2/5/2013 1:50:38 PM

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.25; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=15mm, Pin=250mW/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.64 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.64 mW/g

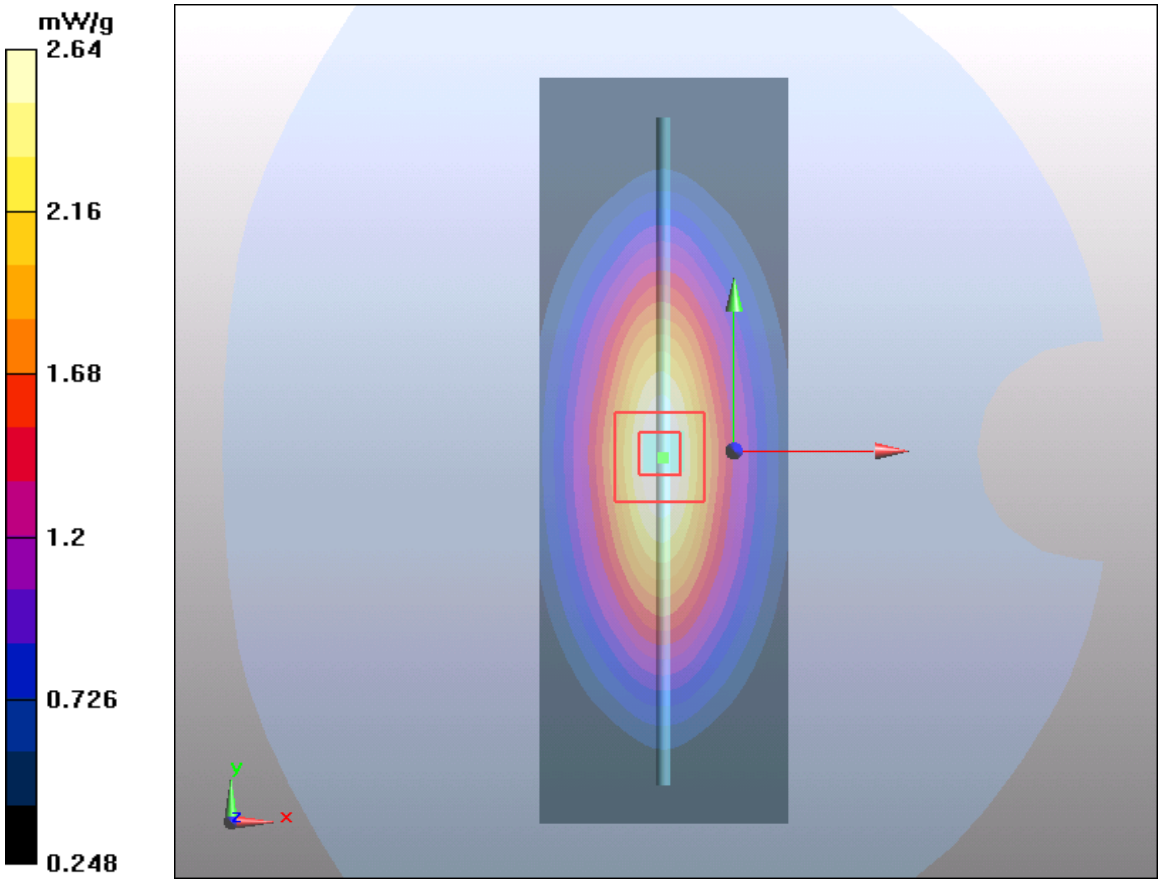


Figure 7 System Performance Check 835MHz 250mW

System Performance Check at 835 MHz Body TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date/Time: 2/21/2013 9:01:07 AM

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 55.89; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=15mm, Pin=250mW/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.58 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.9 V/m; Power Drift = -0.058 dB

Peak SAR (extrapolated) = 3.5 W/kg

SAR(1 g) = 2.41 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.6 mW/g

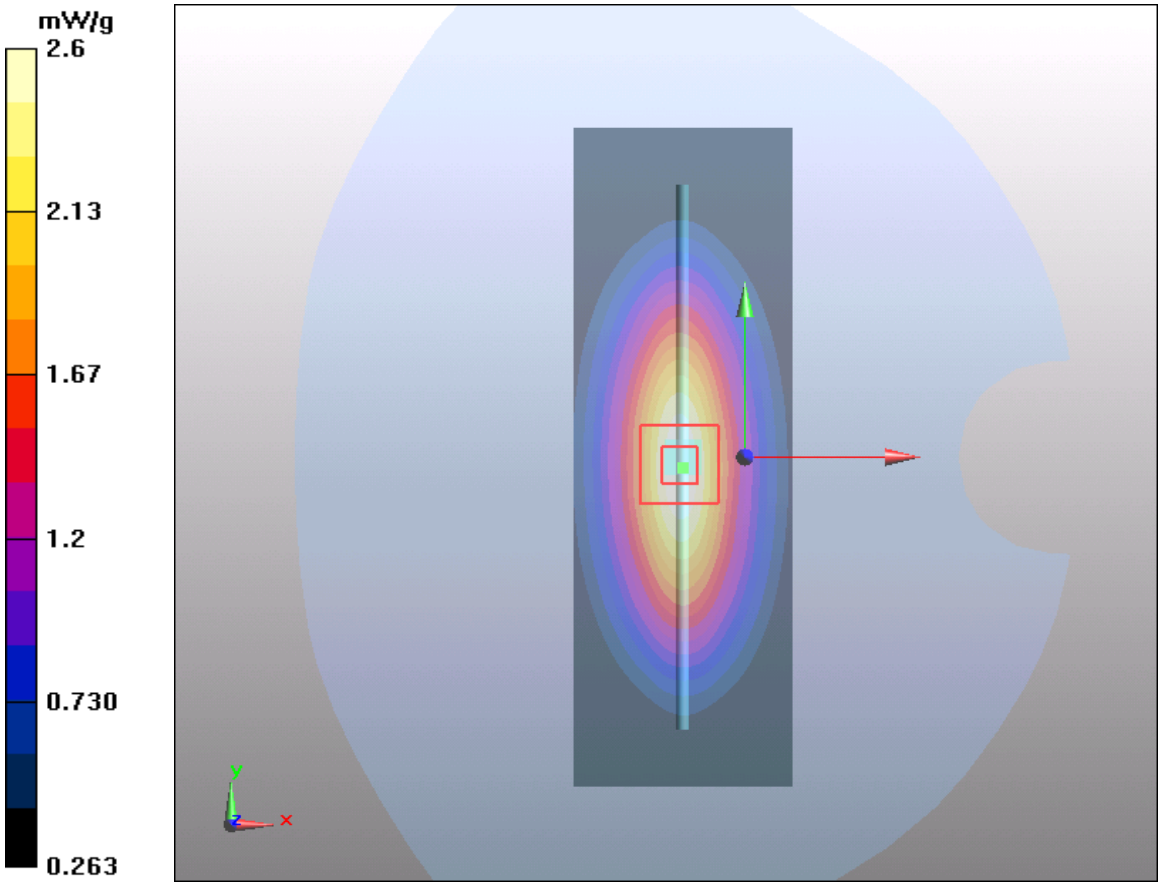


Figure 8 System Performance Check 835MHz 250mW

System Performance Check at 1900 MHz Head TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d060

Date/Time: 2/24/2013 7:00:55 AM

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.41 mho/m; ε_r = 39.98; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.3 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.5 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.48 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (measured) = 10.7 mW/g

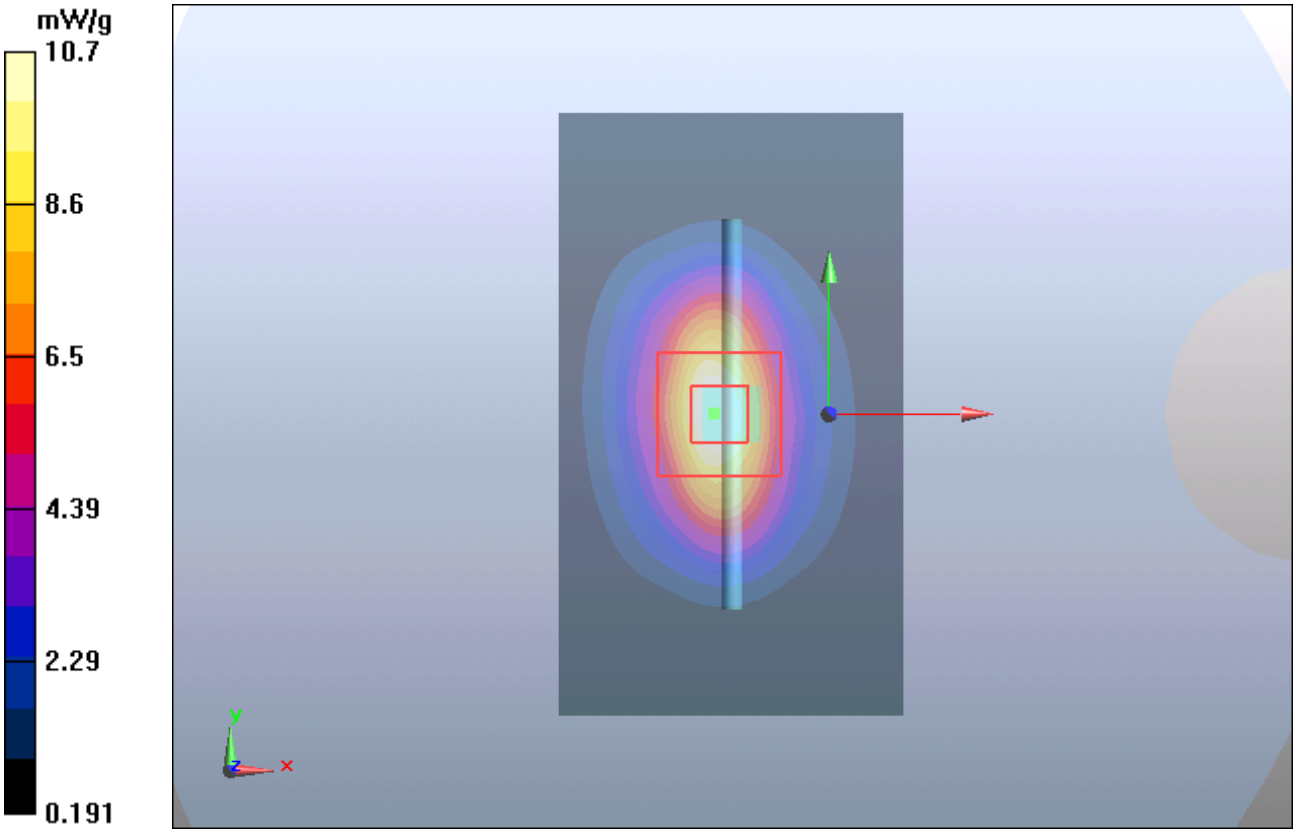


Figure 9 System Performance Check 1900MHz 250mW

System Performance Check at 1900 MHz Body TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 5d060

Date/Time: 2/25/2013 8:42:25 AM

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.52 mho/m; ε_r = 52.56; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.2 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.3 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.93 mW/g; SAR(10 g) = 5.25 mW/g

Maximum value of SAR (measured) = 11.3 mW/g

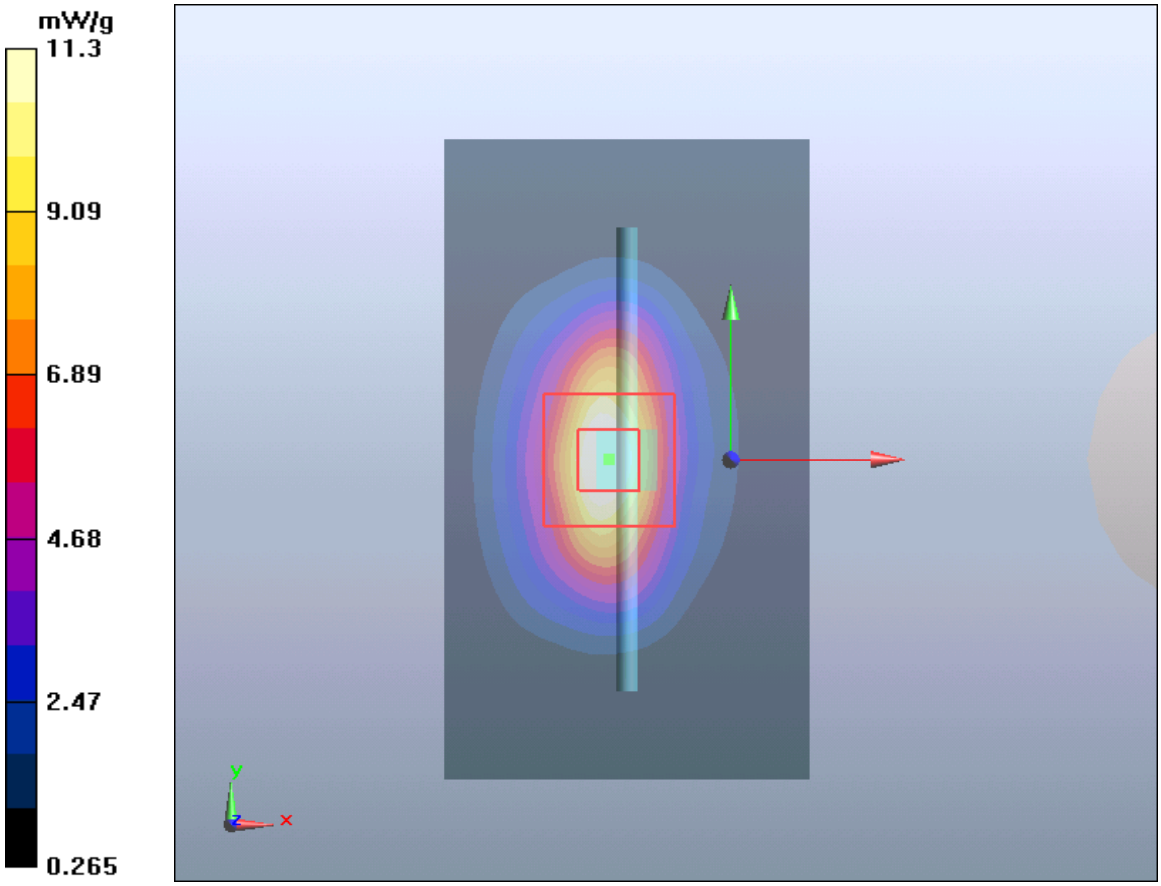


Figure 10 System Performance Check 1900MHz 250mW

System Performance Check at 2450 MHz Head TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 786

Date/Time: 2/16/2013 12:15:12 PM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.86 mho/m; ε_r = 38.53; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 18.2 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.8 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 30 W/kg

SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (measured) = 15.9 mW/g

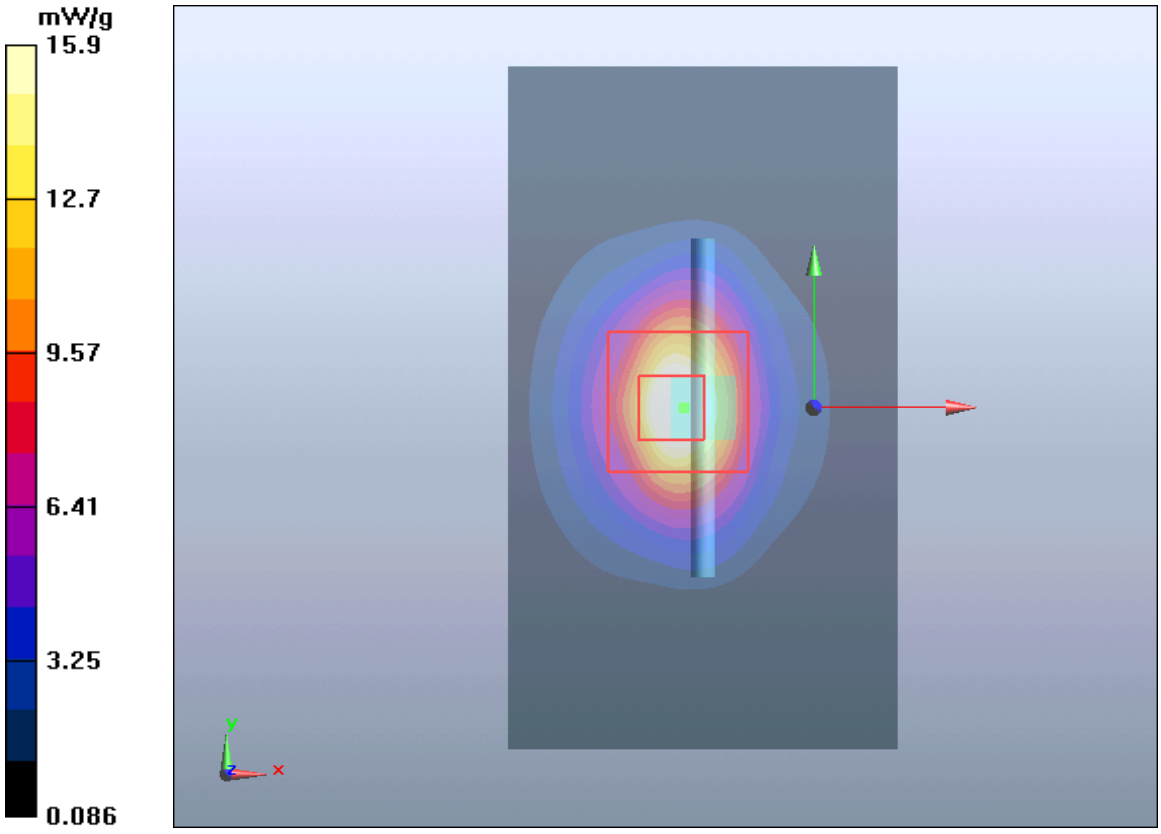


Figure 11 System Performance Check 2450MHz 250mW

System Performance Check at 2450 MHz Body TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 786

Date/Time: 2/22/2013 7:14:59 AM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.90 mho/m; ε_r = 51.69; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 16 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.2 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 25.4 W/kg

SAR(1 g) = 12.9 mW/g; SAR(10 g) = 6.13 mW/g

Maximum value of SAR (measured) = 14.9 mW/g

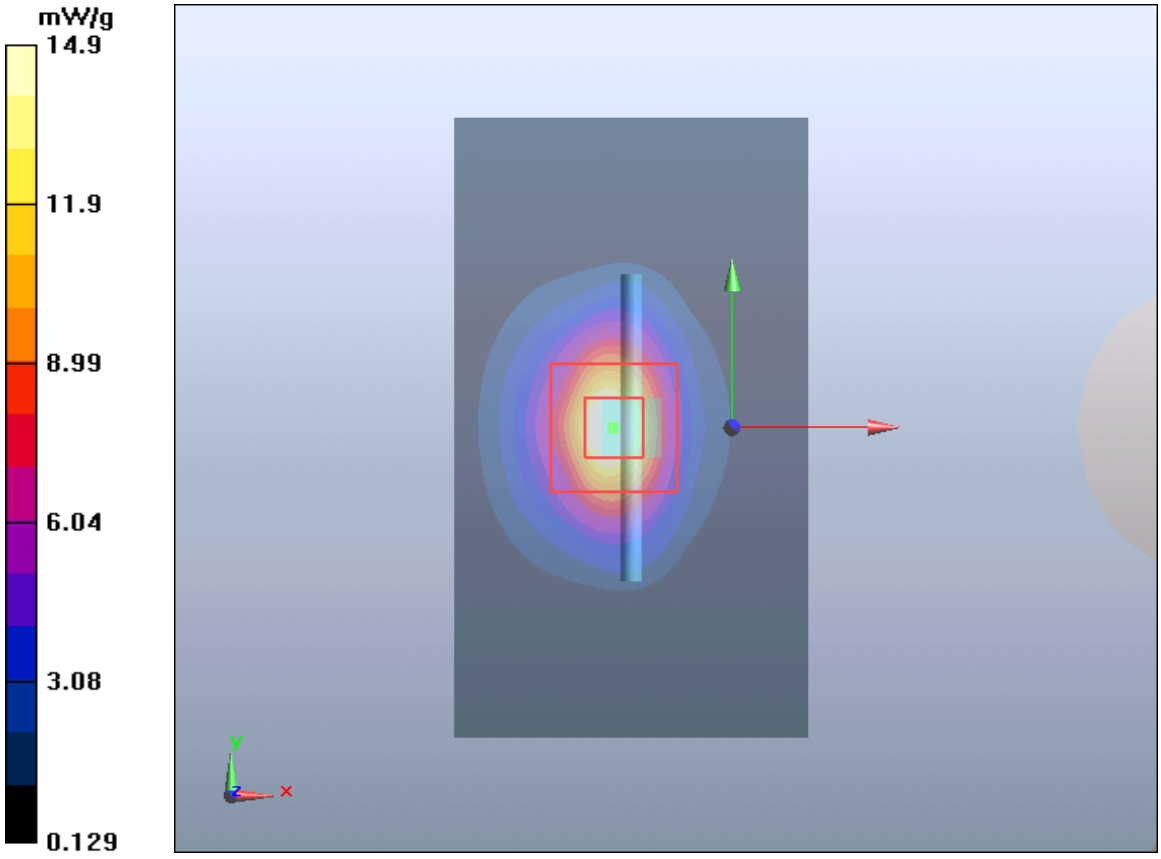


Figure 12 System Performance Check 2450MHz 250Mw

System Performance Check at 2450 MHz Head TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 786

Date/Time: 3/11/2013 2:11:11 PM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.86 mho/m; ε_r = 38.57; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 18.0 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.8 V/m; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 30 W/kg

SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.21 mW/g

Maximum value of SAR (measured) = 15.1 mW/g

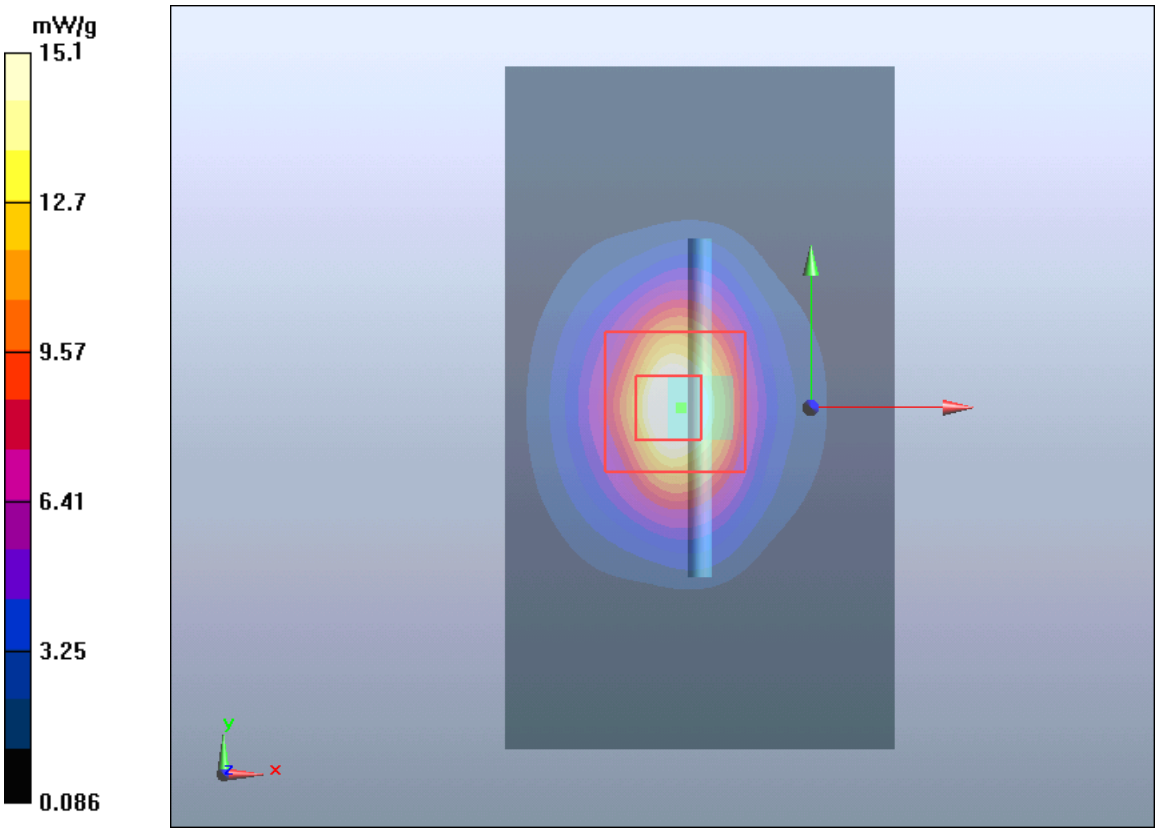


Figure 13 System Performance Check 2450MHz 250mW

System Performance Check at 2450 MHz Body TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 786

Date/Time: 3/11/2013 4:10:51 PM

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2450 MHz; σ = 1.91 mho/m; ε_r = 51.61; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

d=10mm, Pin=250mW/Area Scan (41x71x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 16 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.2 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 25.4 W/kg

SAR(1 g) = 12.8 mW/g; SAR(10 g) = 6.12 mW/g

Maximum value of SAR (measured) = 14.4 mW/g

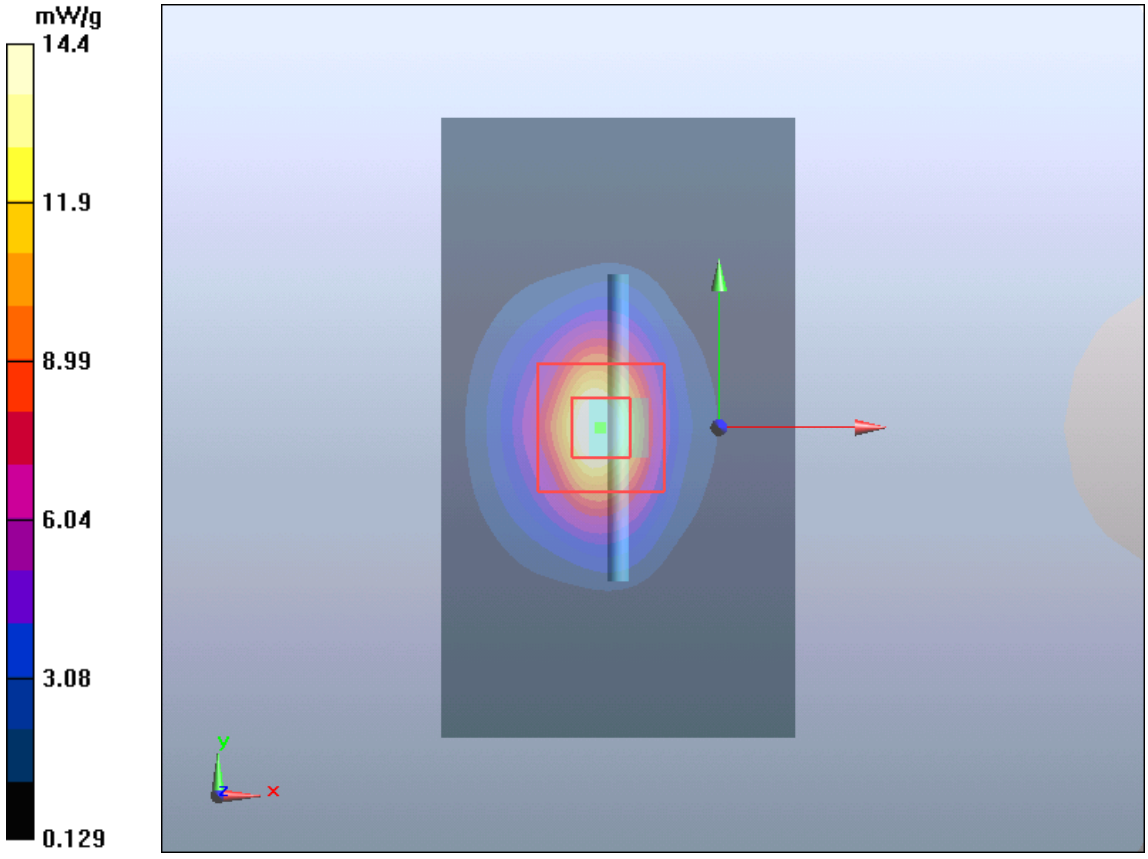


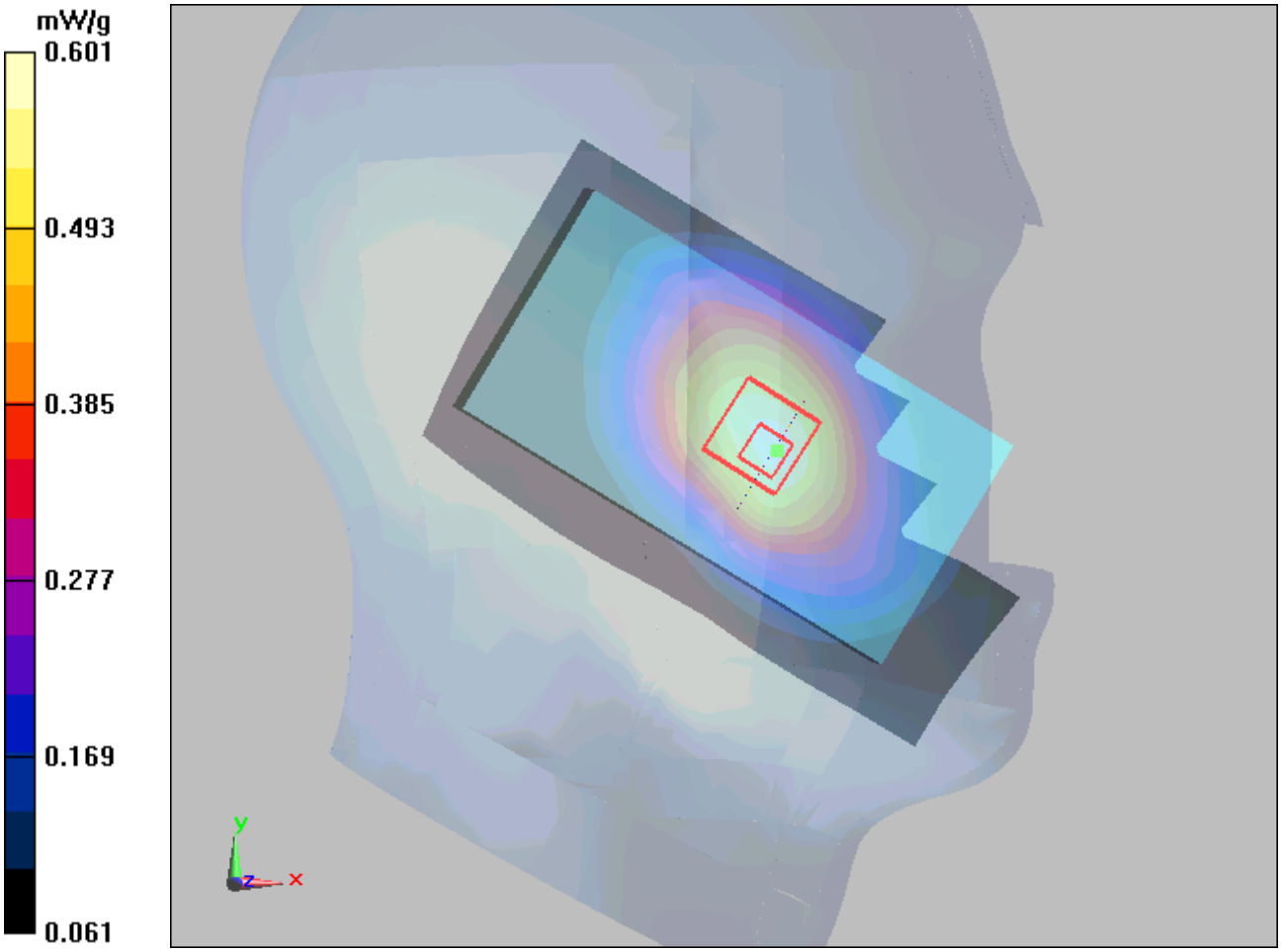
Figure 14 System Performance Check 2450MHz 250mW

ANNEX C: Graph Results

CDMA BC0 Left Cheek Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 5:22:48 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.584 mW/g
Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.67 V/m; Power Drift = 0.007 dB
Peak SAR (extrapolated) = 0.724 W/kg
SAR(1 g) = 0.562 mW/g; SAR(10 g) = 0.417 mW/g
Maximum value of SAR (measured) = 0.601 mW/g



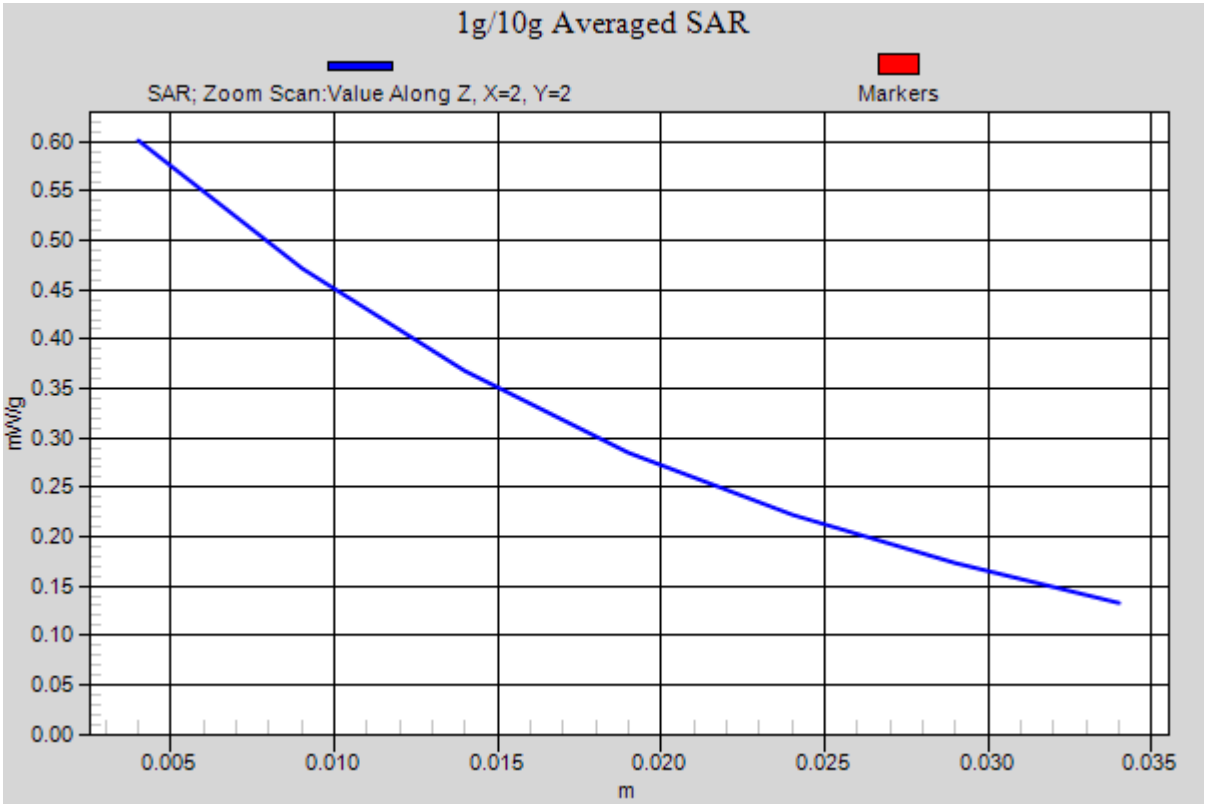


Figure 15 CDMA BC0 Left Hand Touch Cheek Channel 384

CDMA BC0 Left Tilt Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 5:07:02 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.376 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.438 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 0.370 mW/g

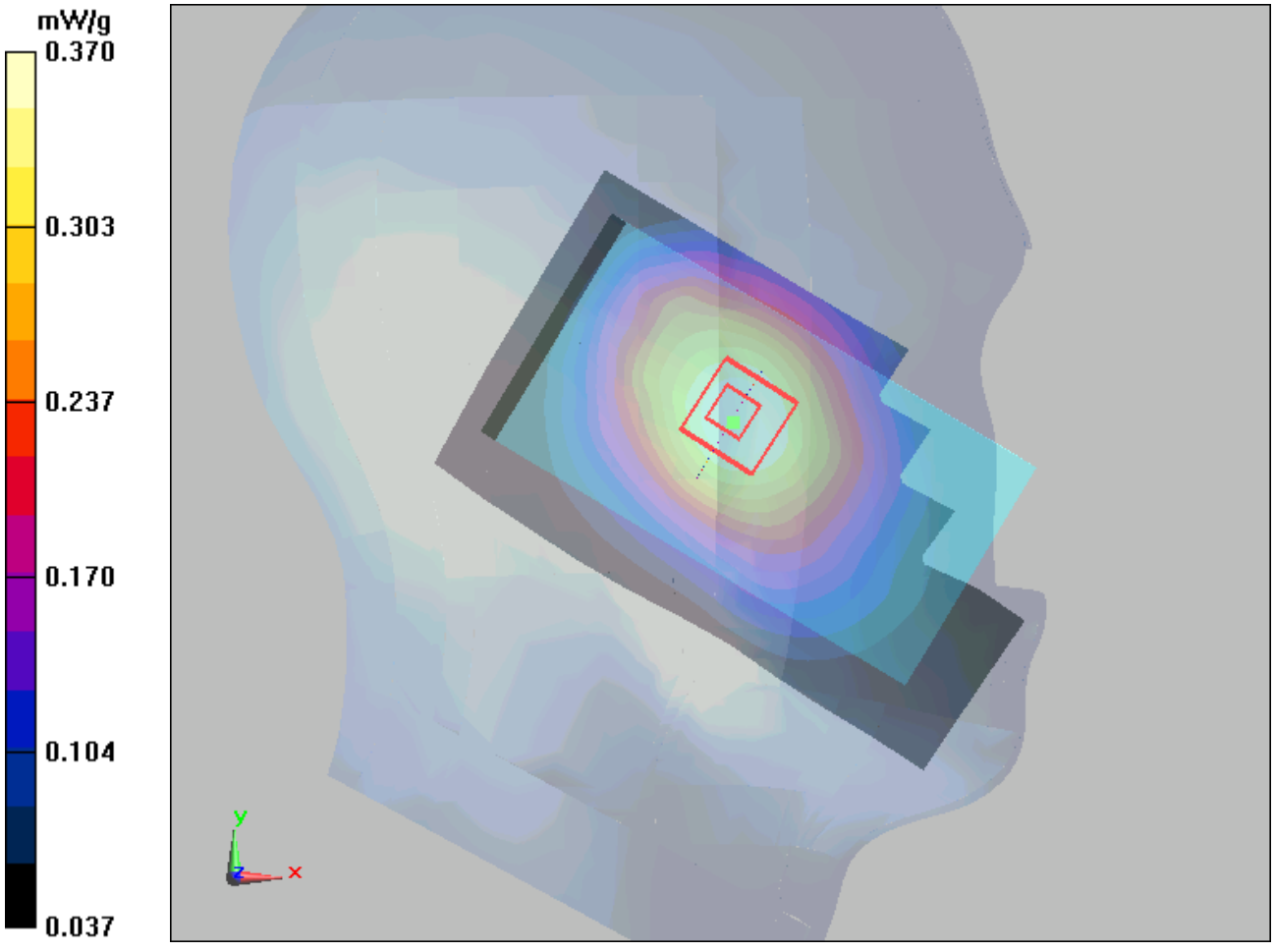


Figure 16 CDMA BC0 Left Hand Tilt 15° Channel 384

CDMA BC0 Right Cheek Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 6:38:07 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.398 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.92 V/m; Power Drift = -0.121 dB
Peak SAR (extrapolated) = 0.466 W/kg
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.278 mW/g
Maximum value of SAR (measured) = 0.394 mW/g

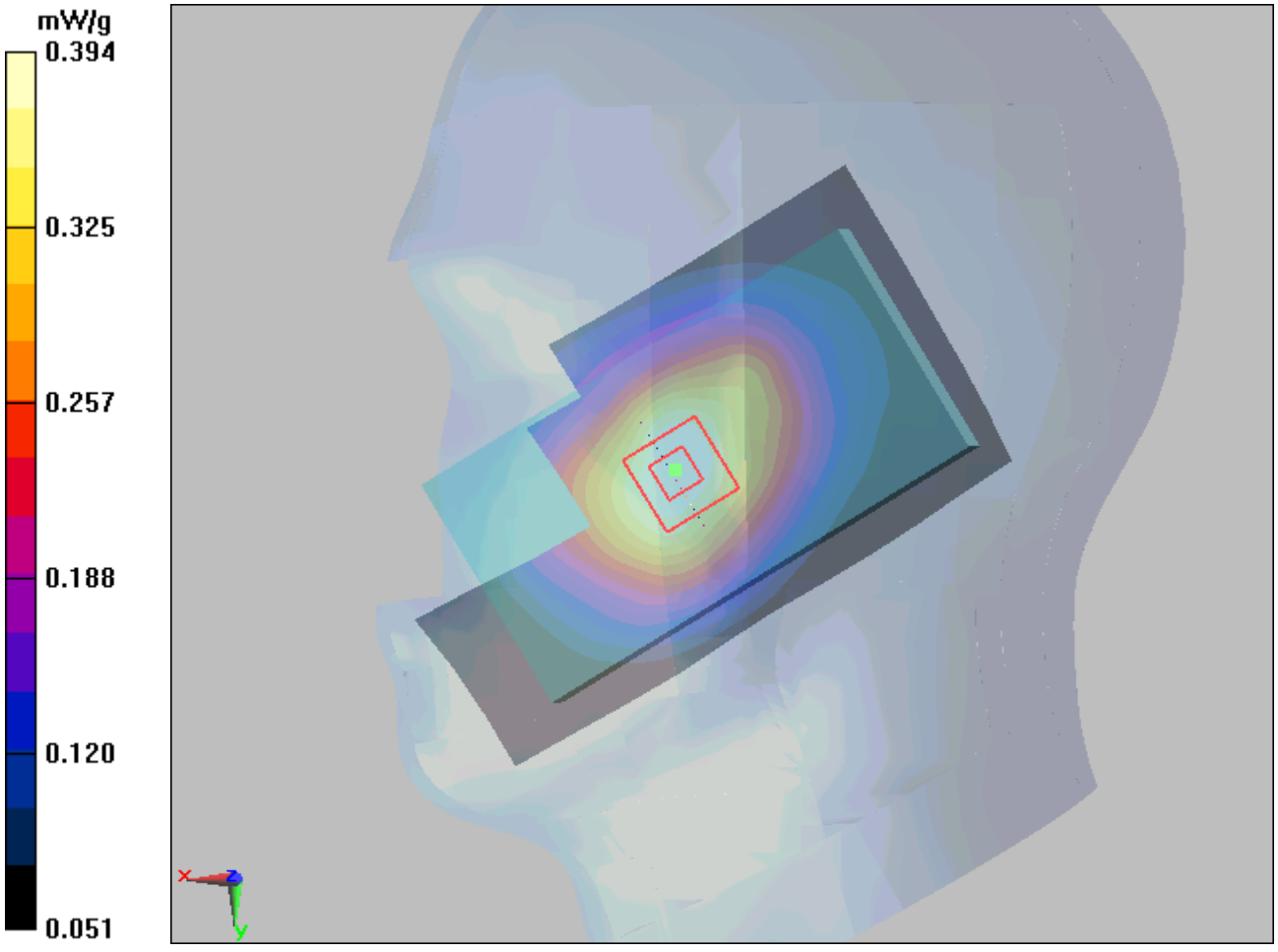


Figure 17 CDMA BC0 Right Hand Touch Cheek Channel 384

CDMA BC0 Right Tilt Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 7:01:24 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.349 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.8 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 0.415 W/kg
SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.253 mW/g
Maximum value of SAR (measured) = 0.354 mW/g

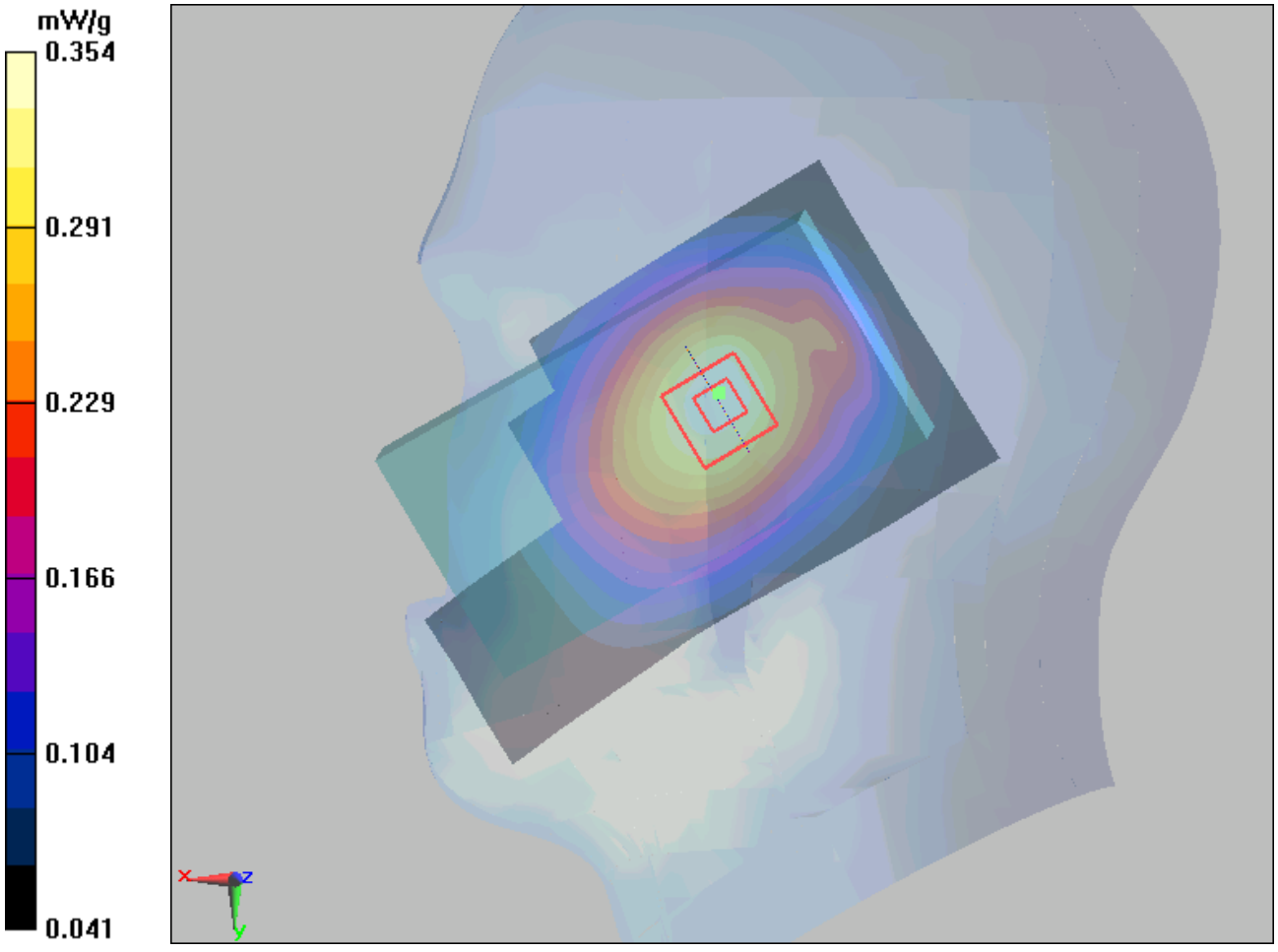


Figure 18 CDMA BC0 Right Hand Tilt 15° Channel 384

CDMA BC0 Left Cheek Middle (Battery 2, Full Power)

Date/Time: 2/5/2013 7:19:52 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.523 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.93 V/m; Power Drift = 0.129 dB
Peak SAR (extrapolated) = 0.647 W/kg
SAR(1 g) = 0.502 mW/g; SAR(10 g) = 0.371 mW/g
Maximum value of SAR (measured) = 0.537 mW/g

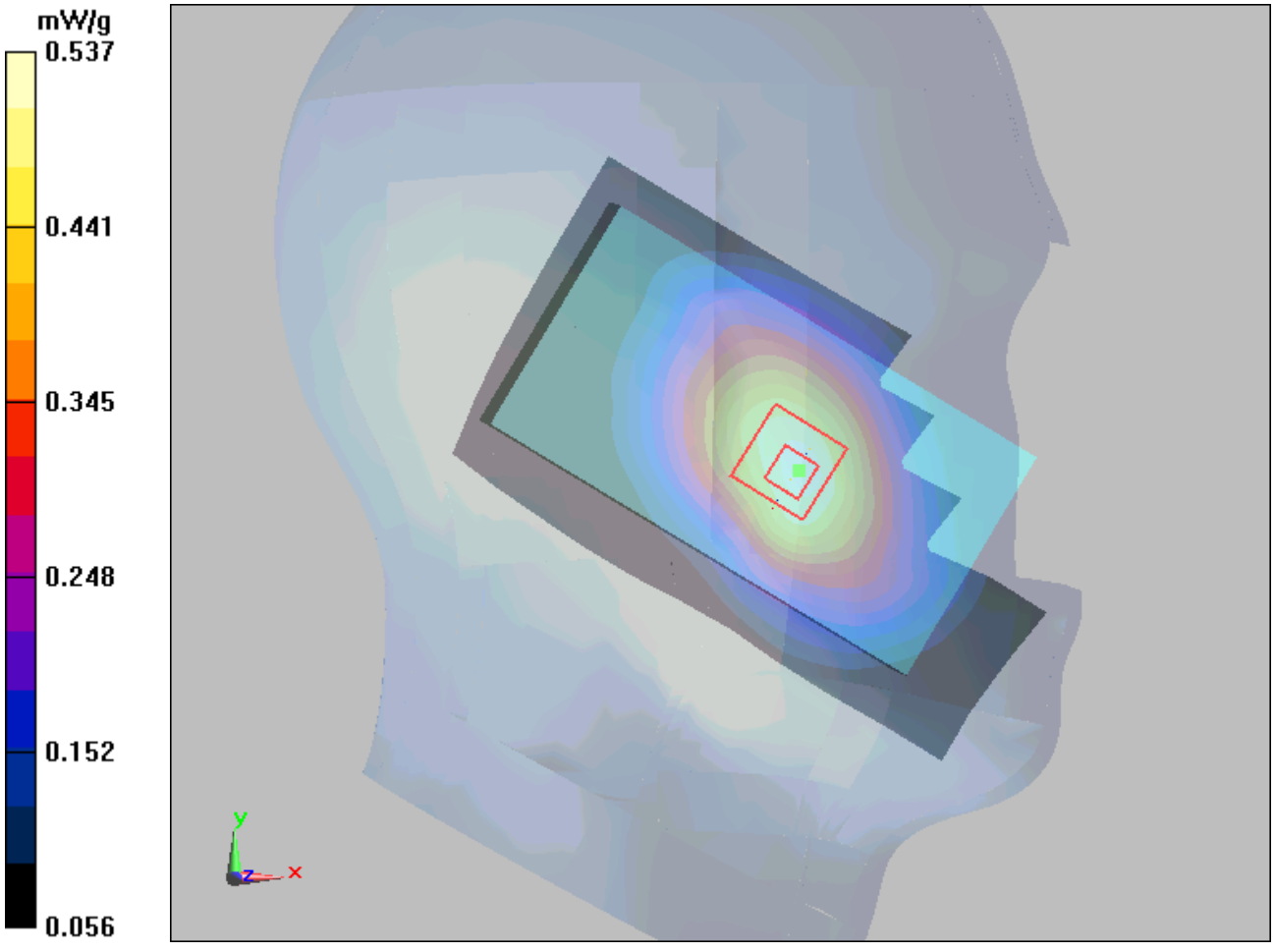


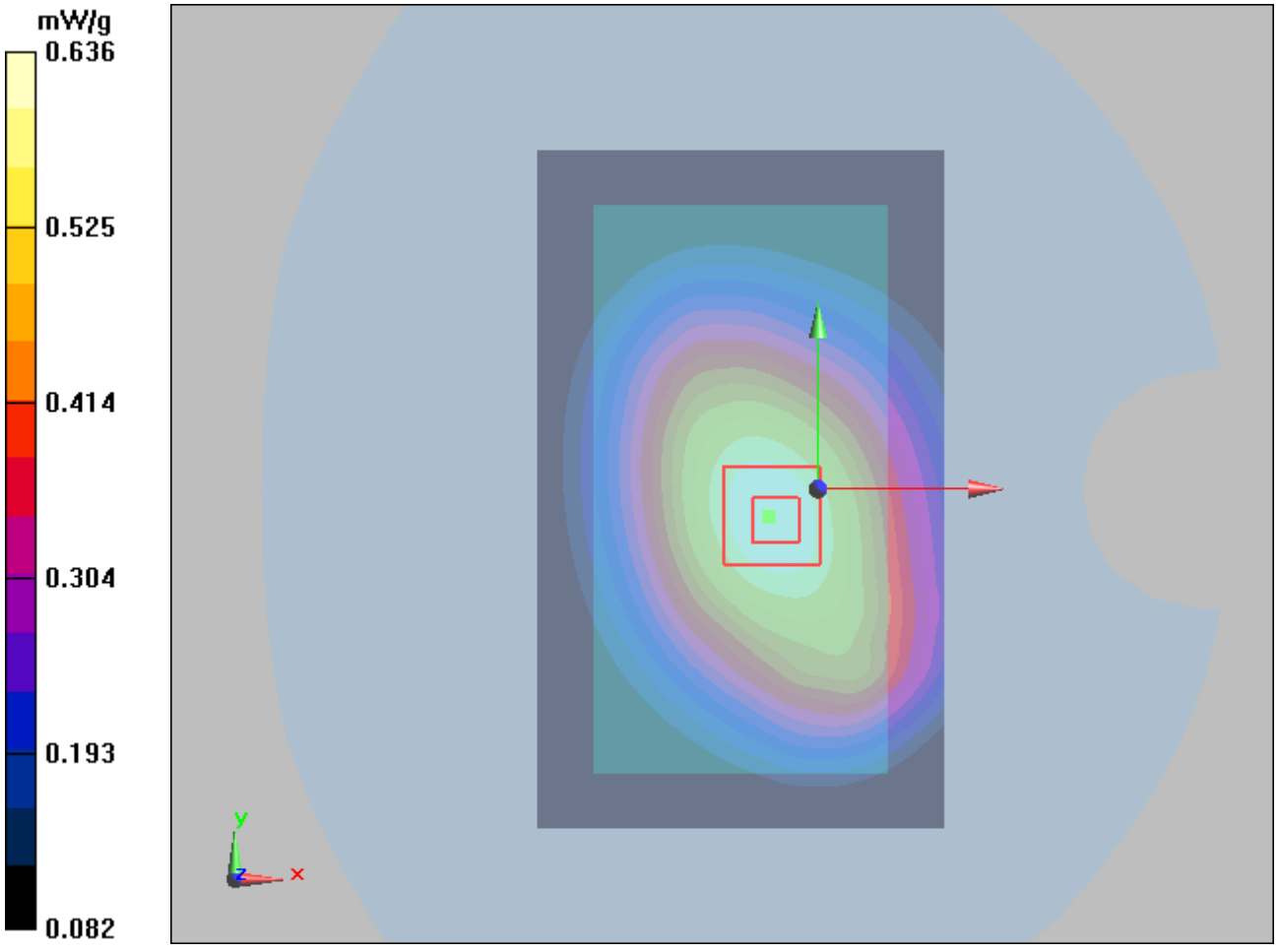
Figure 19 CDMA BC0 Left Hand Touch Cheek Channel 384

CDMA BC0 Back Side Middle (Battery 1, Full Power)

Date/Time: 2/21/2013 8:47:24 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.640 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.4 V/m; Power Drift = -0.000167 dB
Peak SAR (extrapolated) = 0.778 W/kg
SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.453 mW/g
Maximum value of SAR (measured) = 0.636 mW/g



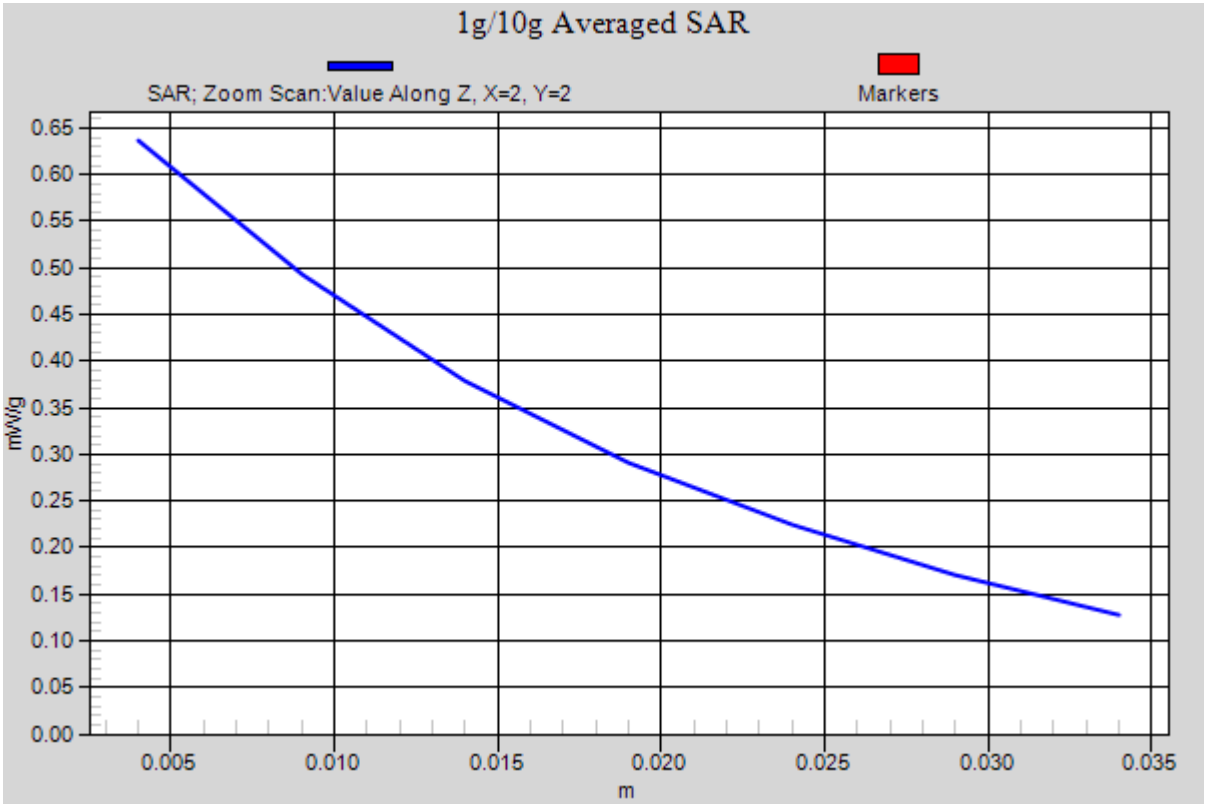


Figure 20 Body, CDMA BC0 Back Side Channel 384

CDMA BC0 Front Side Middle (Battery 1, Full Power)

Date/Time: 2/21/2013 8:30:20 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.479 mW/g

Front side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.2 V/m; Power Drift = -0.062 dB
Peak SAR (extrapolated) = 0.552 W/kg
SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.332 mW/g
Maximum value of SAR (measured) = 0.459 mW/g

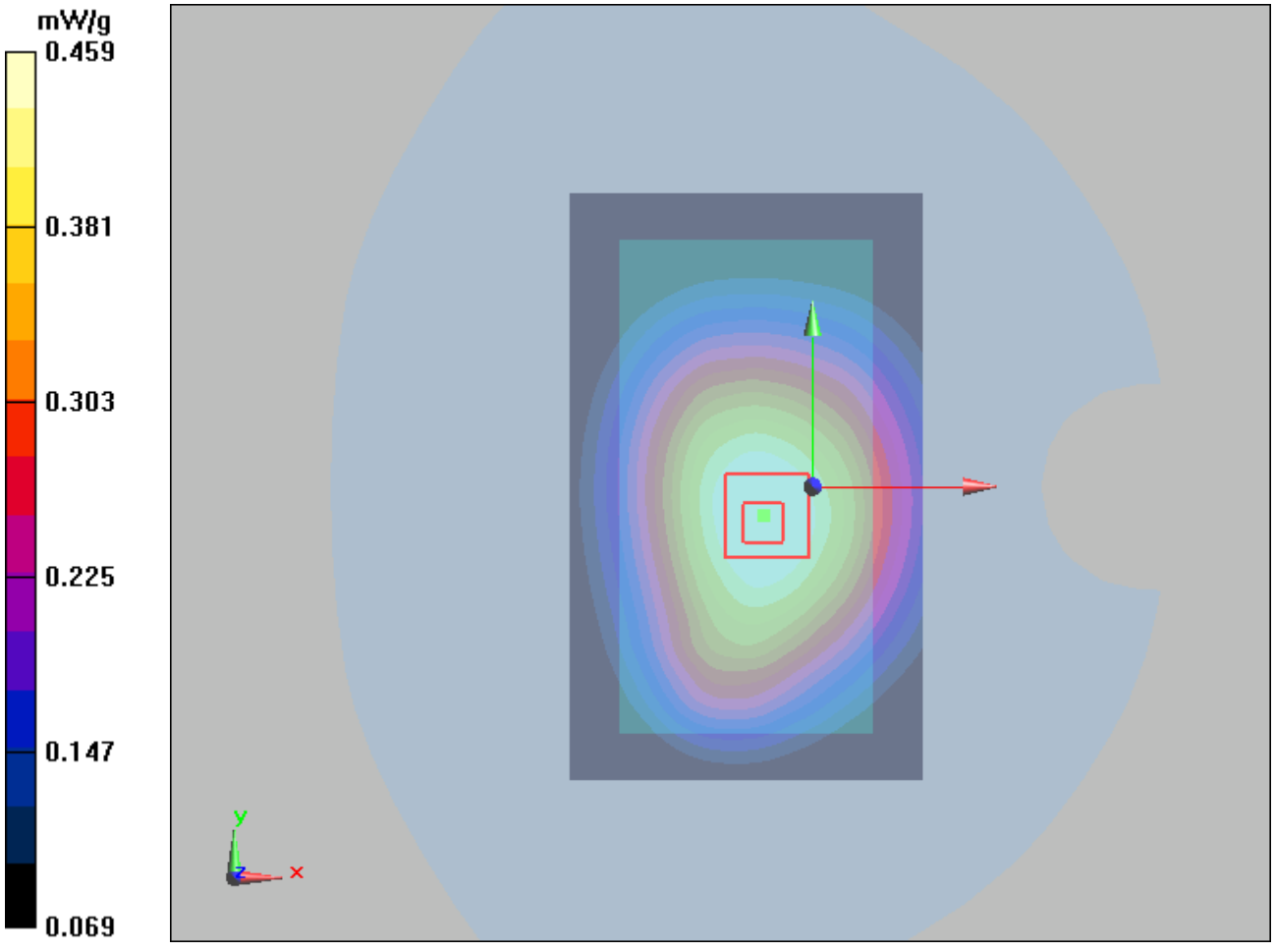


Figure 21 Body, CDMA BC0 Front Side Channel 384

CDMA BC0 Back Side Middle (Battery 2, Full Power)

Date/Time: 2/21/2013 9:04:37 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.638 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.3 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 0.786 W/kg
SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.453 mW/g
Maximum value of SAR (measured) = 0.640 mW/g

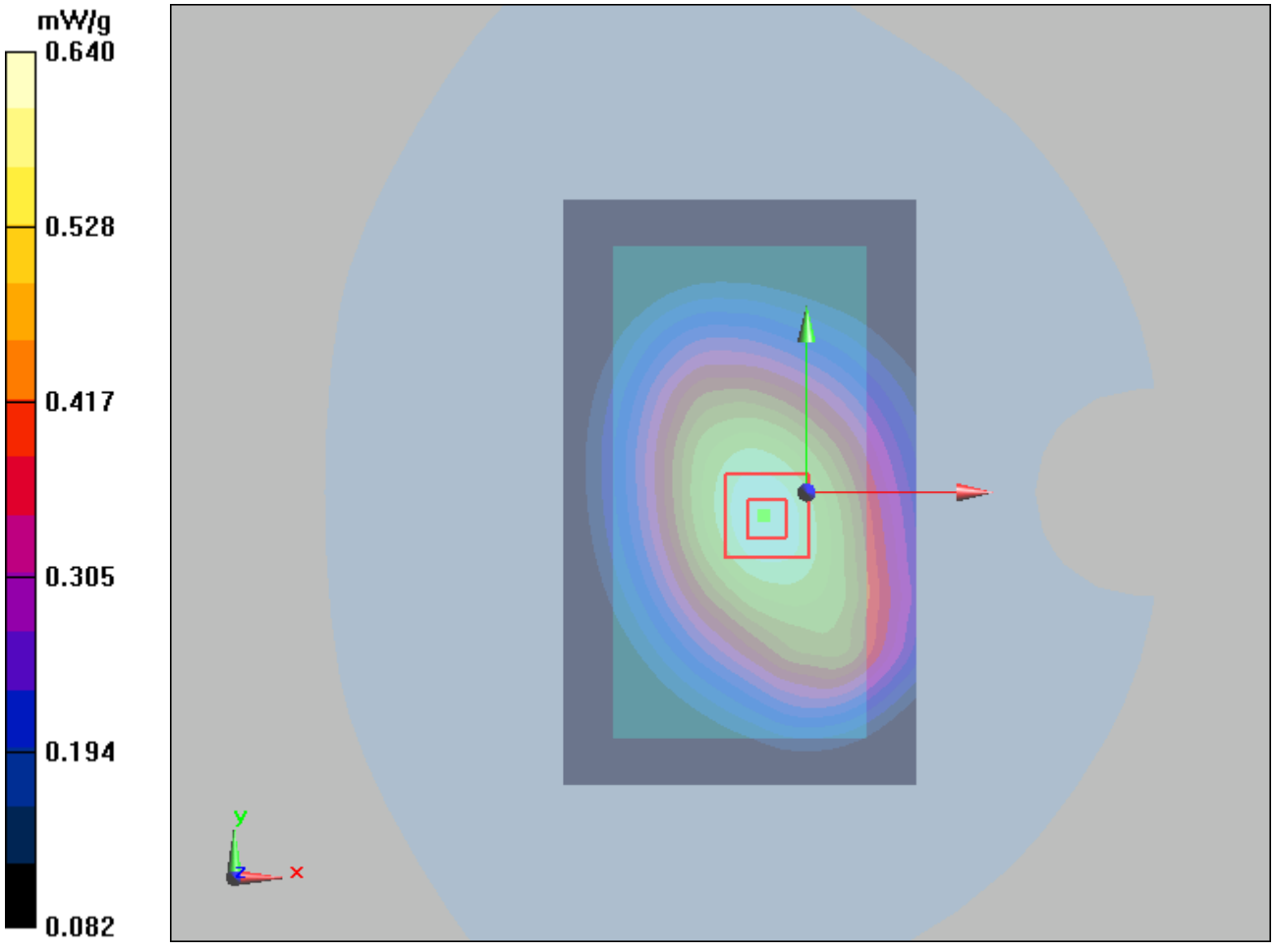


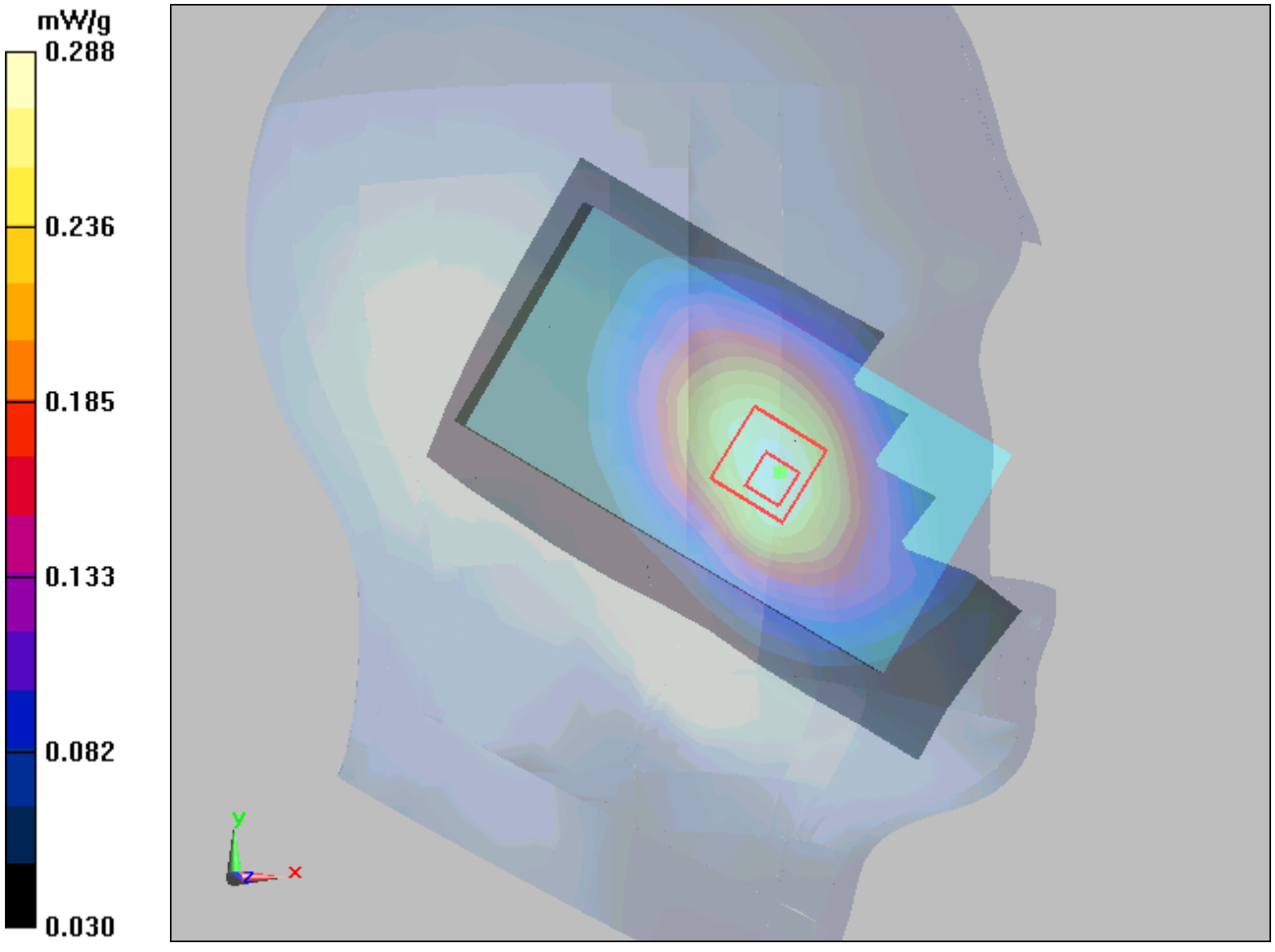
Figure 22 Body, CDMA BC0 Back Side Channel 384

CDMA BC0 Left Cheek Middle (Battery 1, Power=21dBm)

Date/Time: 2/5/2013 11:19:05 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.284 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.72 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.271 mW/g; SAR(10 g) = 0.200 mW/g
Maximum value of SAR (measured) = 0.288 mW/g



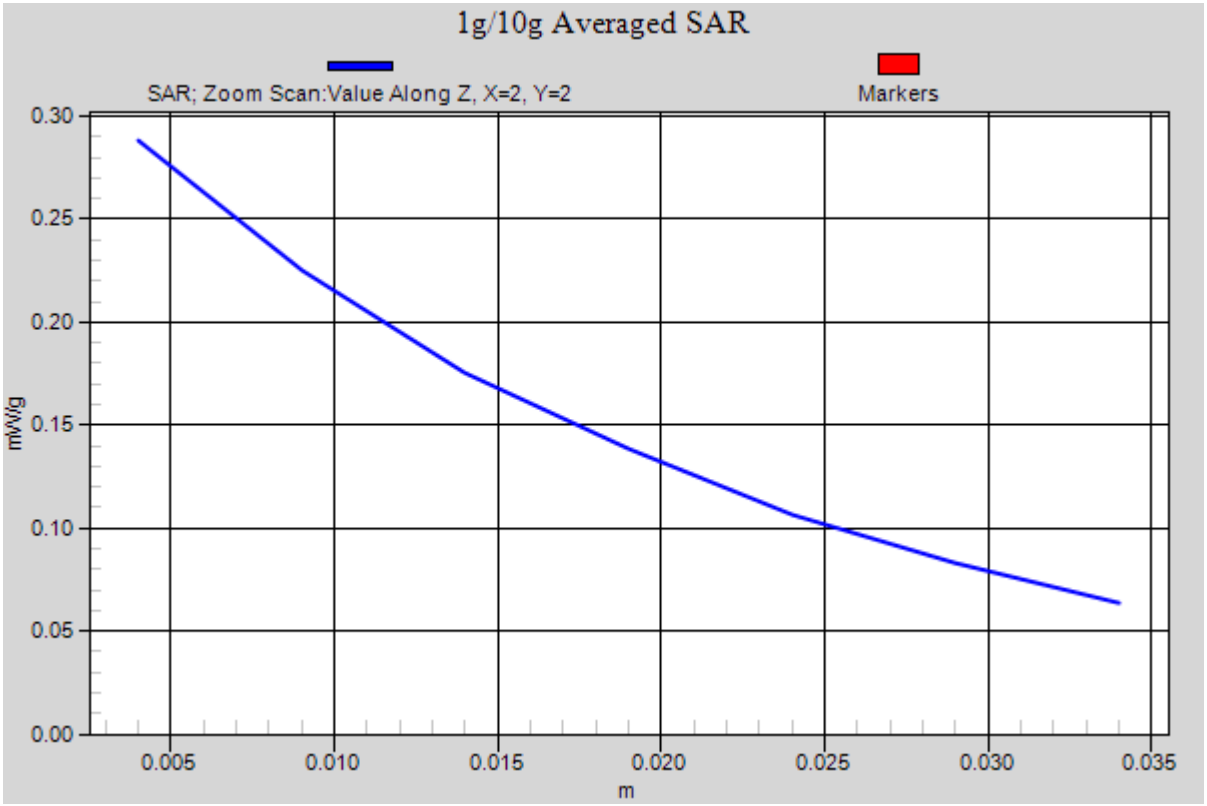


Figure 23 CDMA BC0 Left Hand Touch Cheek Channel 384

CDMA BC0 Left Tilt Middle (Battery 1, Power=21dB)

Date/Time: 2/5/2013 8:32:05 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.152 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.03 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 0.175 W/kg
SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.107 mW/g
Maximum value of SAR (measured) = 0.147 mW/g

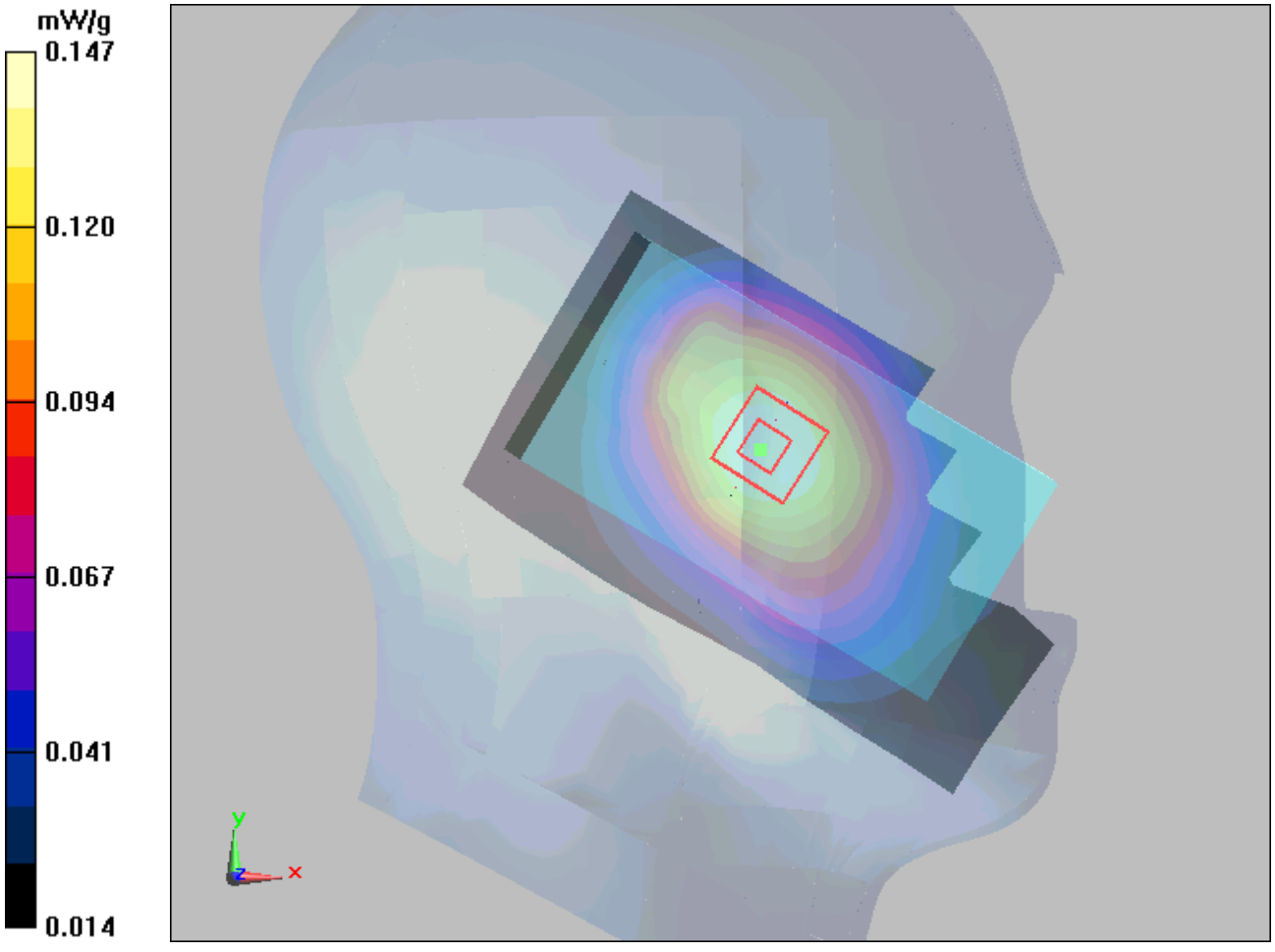


Figure 24 CDMA BC0 Left Hand Tilt 15° Channel 384

CDMA BC0 Right Cheek Middle (Battery 1, Power=21dB)

Date/Time: 2/5/2013 9:31:21 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.217 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.74 V/m; Power Drift = -0.066 dB
Peak SAR (extrapolated) = 0.244 W/kg
SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.147 mW/g
Maximum value of SAR (measured) = 0.205 mW/g

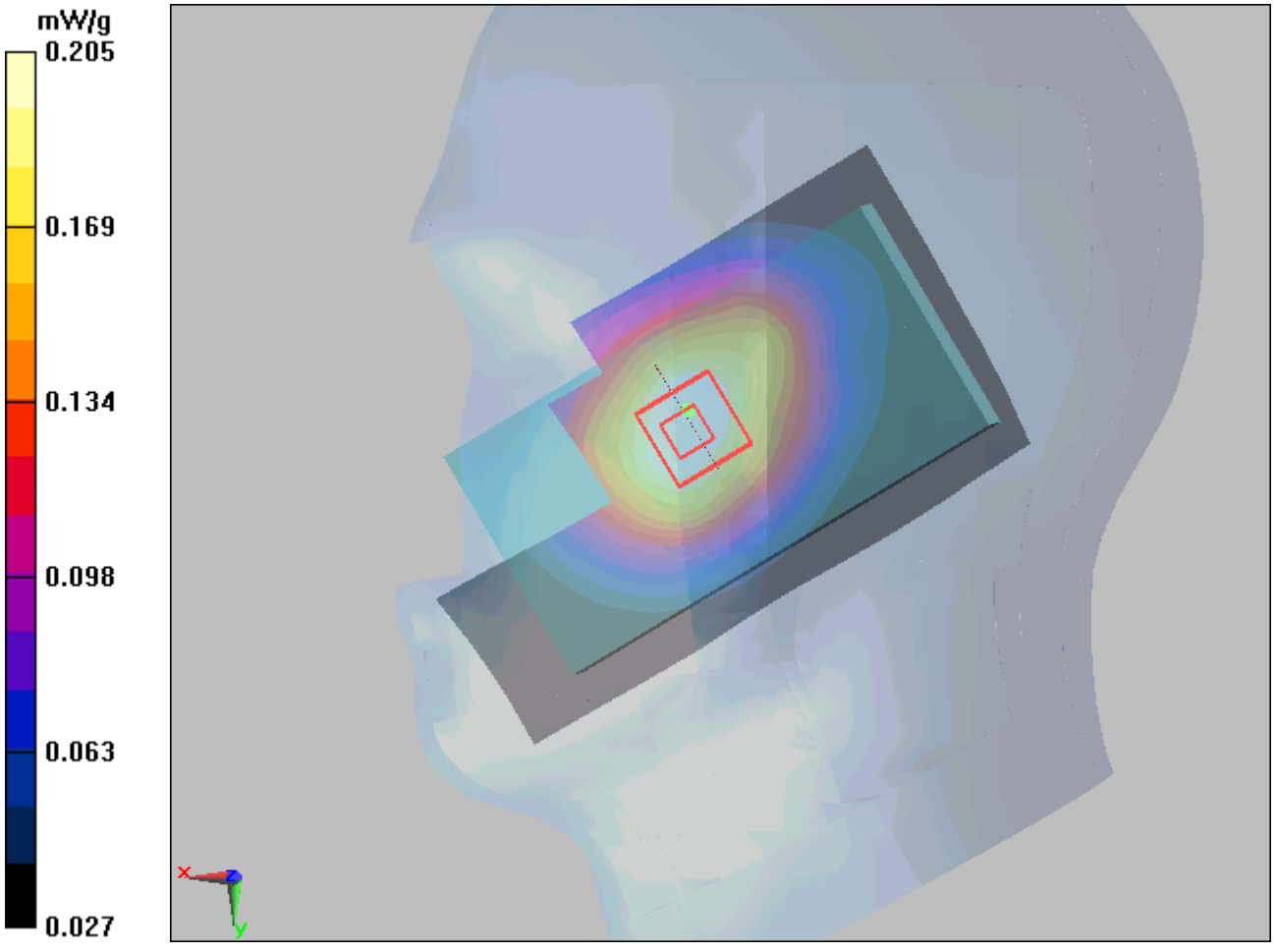


Figure 25 CDMA BC0 Right Hand Touch Cheek Channel 384

CDMA BC0 Right Tilt Middle (Battery 1, Power=21dB)

Date/Time: 2/5/2013 10:24:08 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.165 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.55 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.194 W/kg
SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.119 mW/g
Maximum value of SAR (measured) = 0.166 mW/g

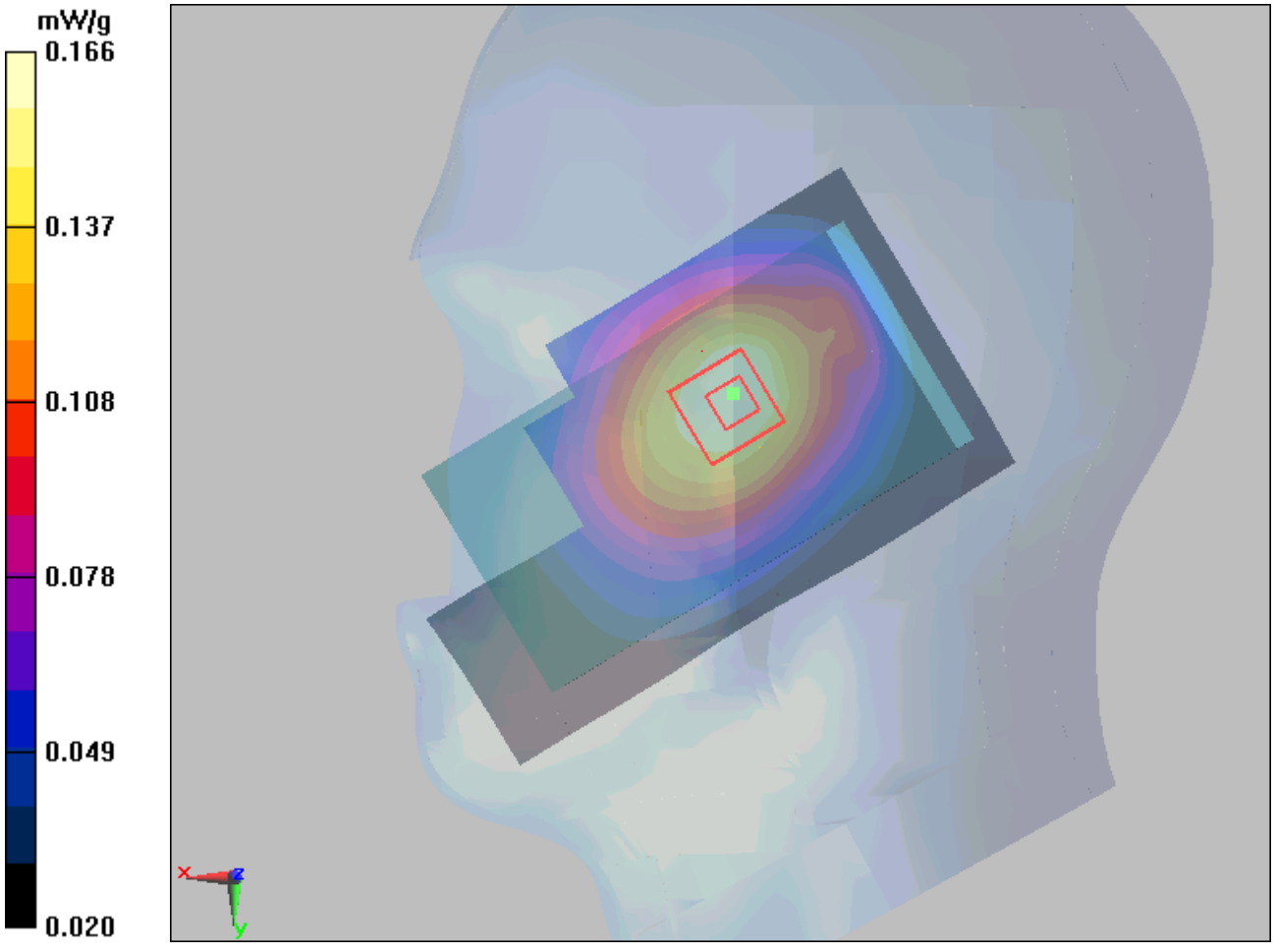


Figure 26 CDMA BC0 Right Hand Tilt 15° Channel 384

CDMA BC0 Left Cheek Middle (Battery 2, Power=21dBm)

Date/Time: 2/5/2013 8:14:37 PM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.918 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.272 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.37 V/m; Power Drift = 0.075 dB
Peak SAR (extrapolated) = 0.344 W/kg
SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.191 mW/g
Maximum value of SAR (measured) = 0.272 mW/g

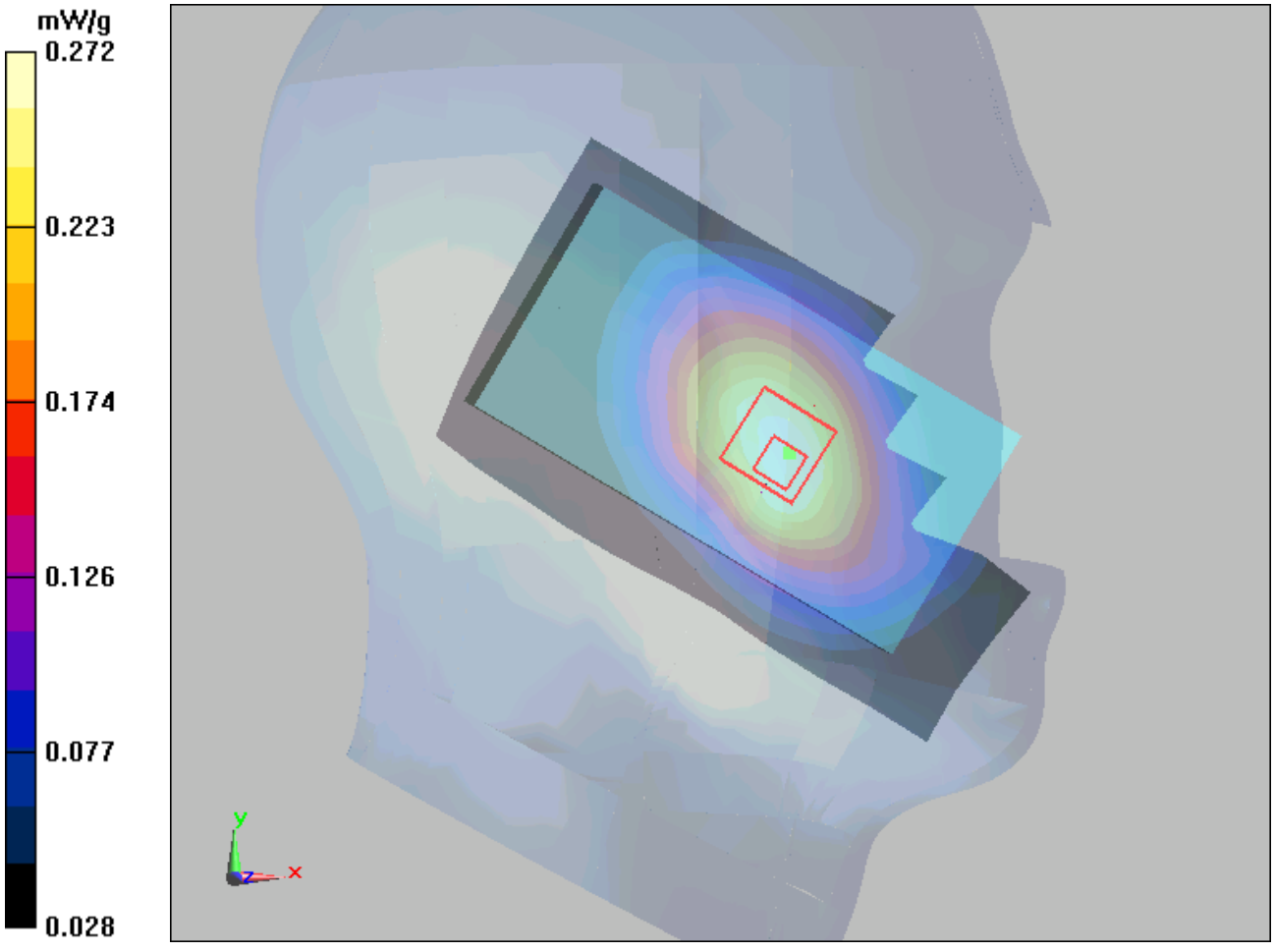


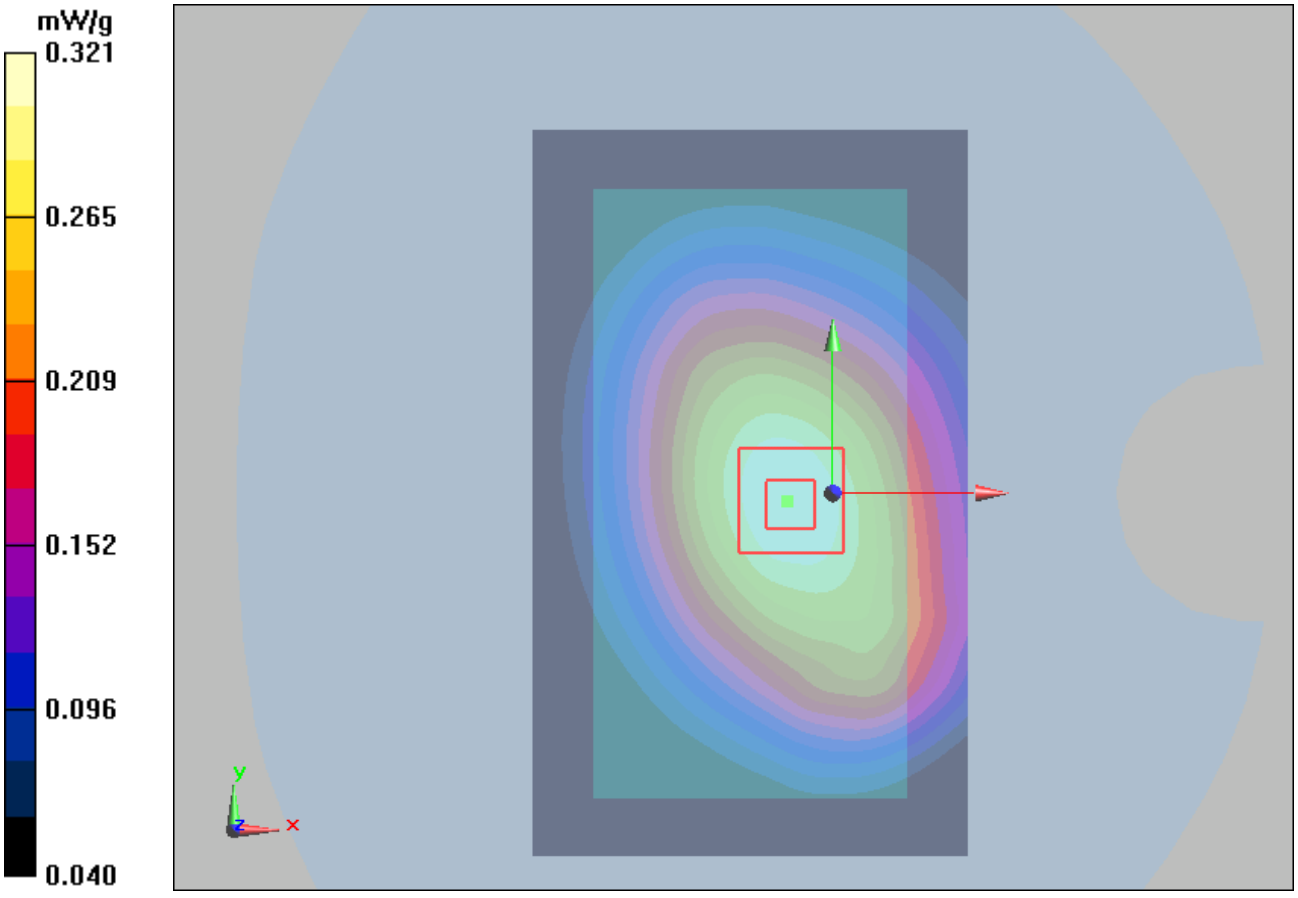
Figure 27 CDMA BC0 Left Hand Touch Cheek Channel 384

CDMA BC0 Back Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/21/2013 10:16:36 AM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.324 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.1 V/m; Power Drift = -0.187 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.224 mW/g
Maximum value of SAR (measured) = 0.321 mW/g



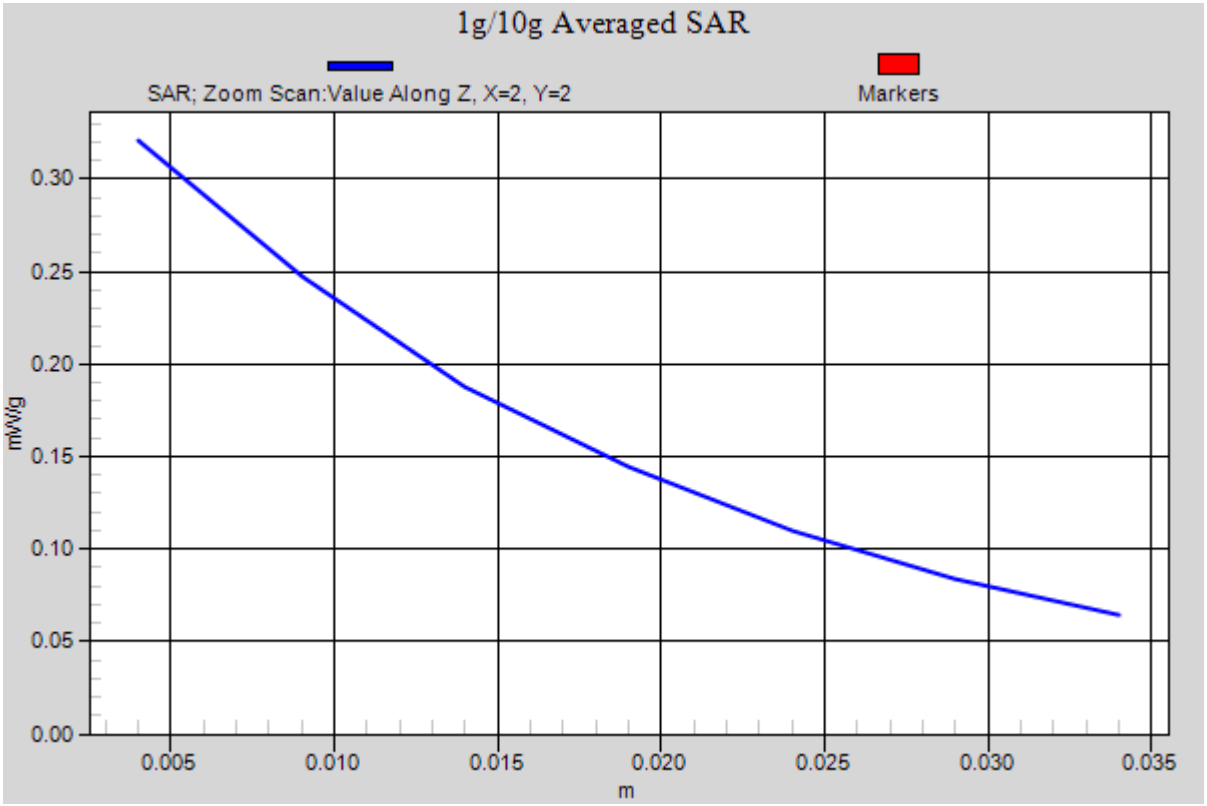


Figure 28 Body, CDMA BC0 Back Side Channel 384

CDMA BC0 Front Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/21/2013 11:13:43 AM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front Side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.231 mW/g

Front Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.3 V/m; Power Drift = -0.00114 dB
Peak SAR (extrapolated) = 0.276 W/kg
SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.165 mW/g
Maximum value of SAR (measured) = 0.229 mW/g

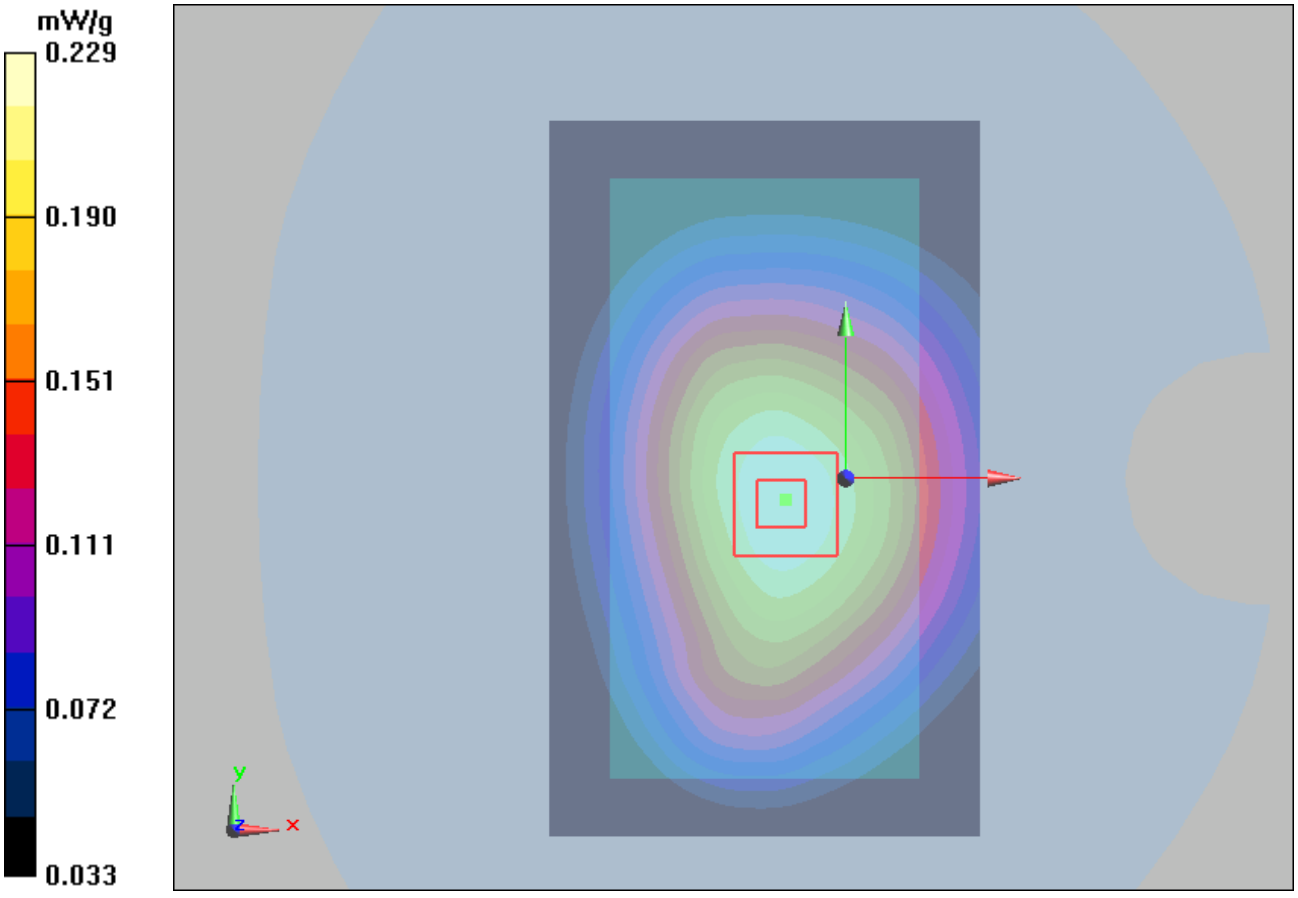


Figure 29 Body, CDMA BC0 Front Side Channel 384

CDMA BC0 Back Side Middle (Battery 2, Power=21dBm)

Date/Time: 2/21/2013 11:34:03 AM
Communication System: CDMA ; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 0.992 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.319 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18 V/m; Power Drift = -0.191 dB
Peak SAR (extrapolated) = 0.383 W/kg
SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.312 mW/g

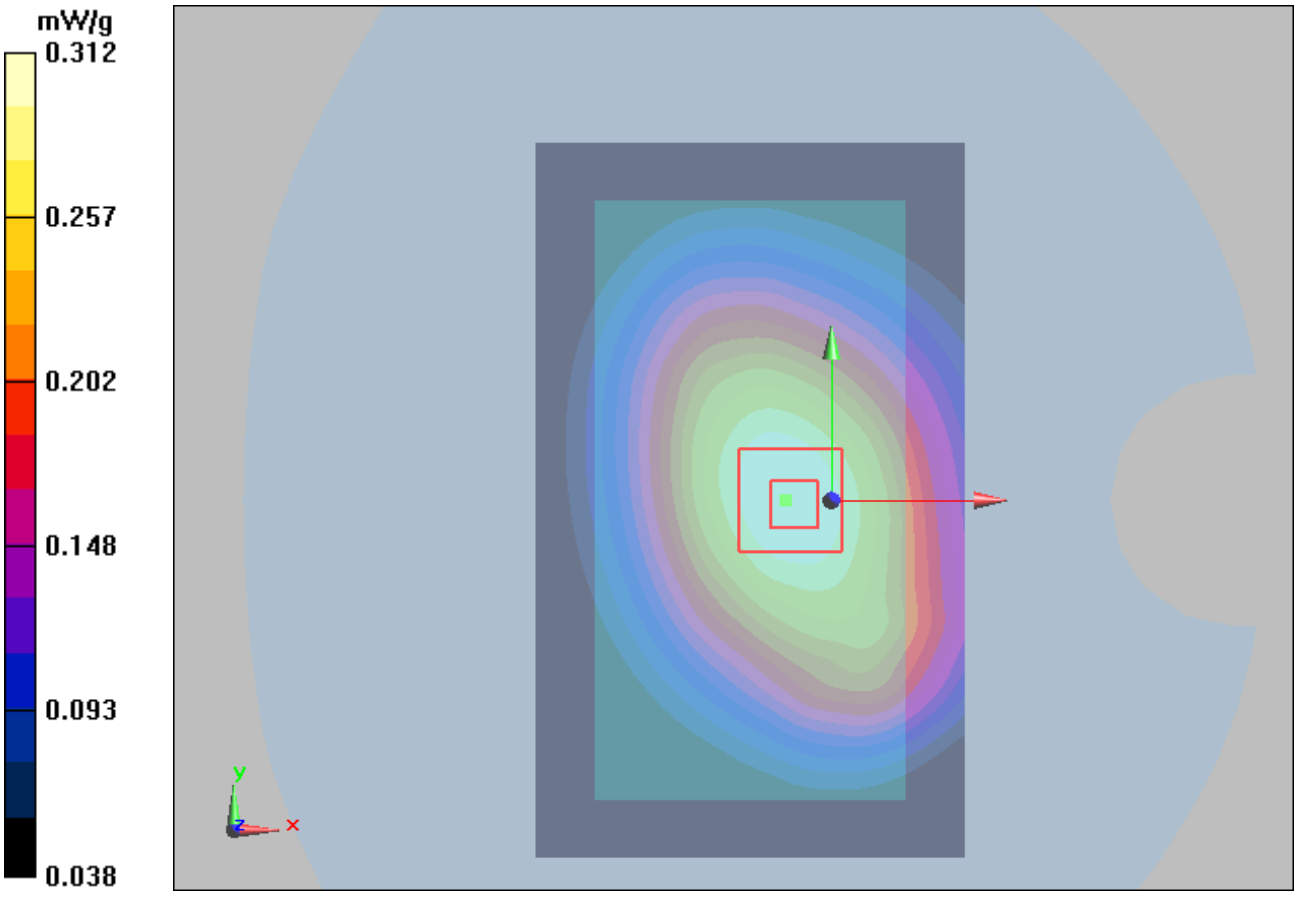


Figure 30 Body, CDMA BC0 Back Side Channel 384

CDMA BC1 Left Cheek High (Battery 1, Full Power)

Date/Time: 2/24/2013 2:15:25 PM
Communication System: CDMA ; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1909 MHz; σ = 1.42 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.9 V/m; Power Drift = 0.082 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.940 mW/g; SAR(10 g) = 0.564 mW/g
Maximum value of SAR (measured) = 1.02 mW/g

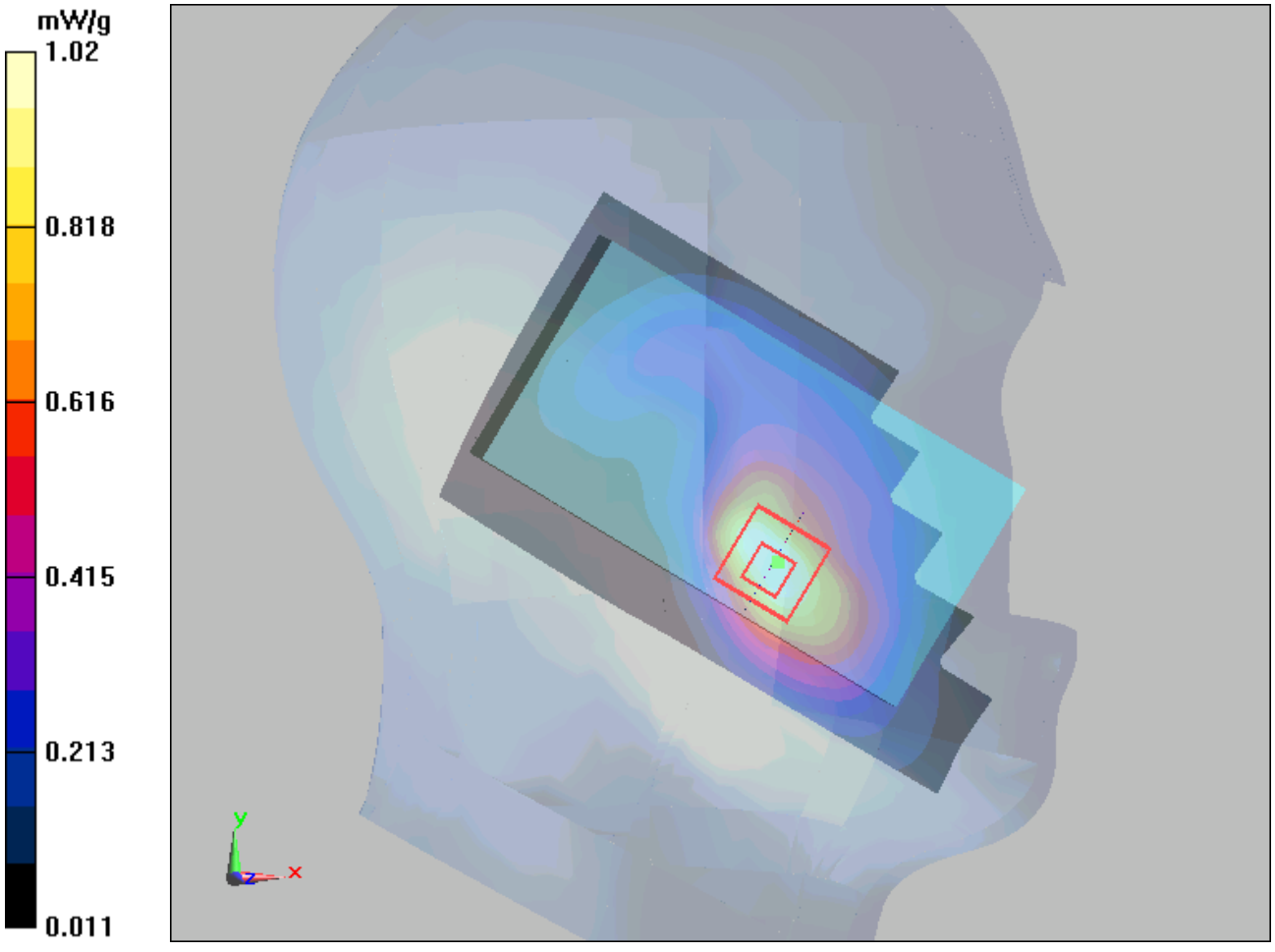


Figure 31 CDMA BC1 Left Hand Touch Cheek Channel 1175

CDMA BC1 Left Cheek Middle (Battery 1, Full Power)

Date/Time: 2/24/2013 2:31:45 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.14 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.1 V/m; Power Drift = -0.00537 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.623 mW/g
Maximum value of SAR (measured) = 1.12 mW/g

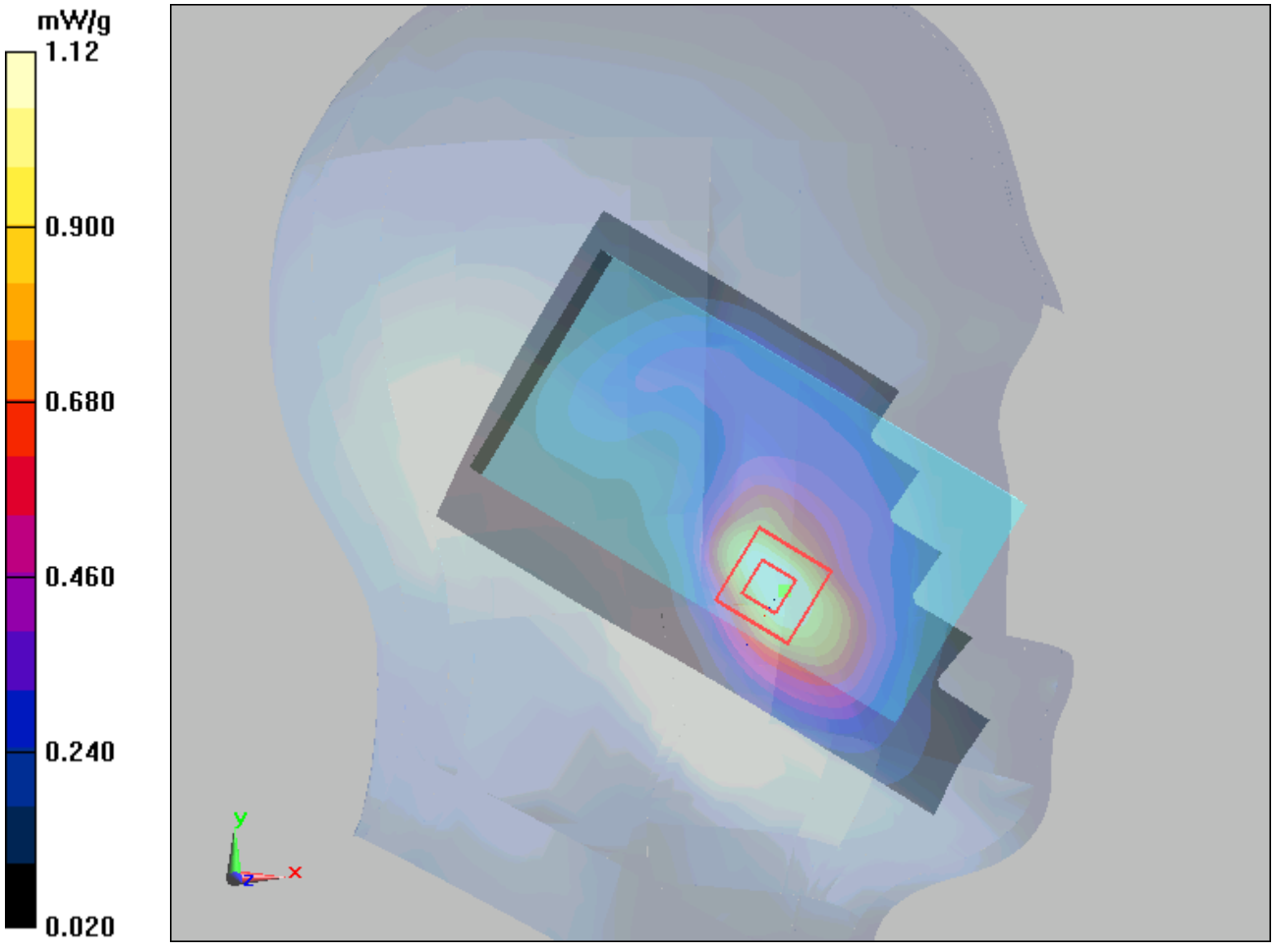


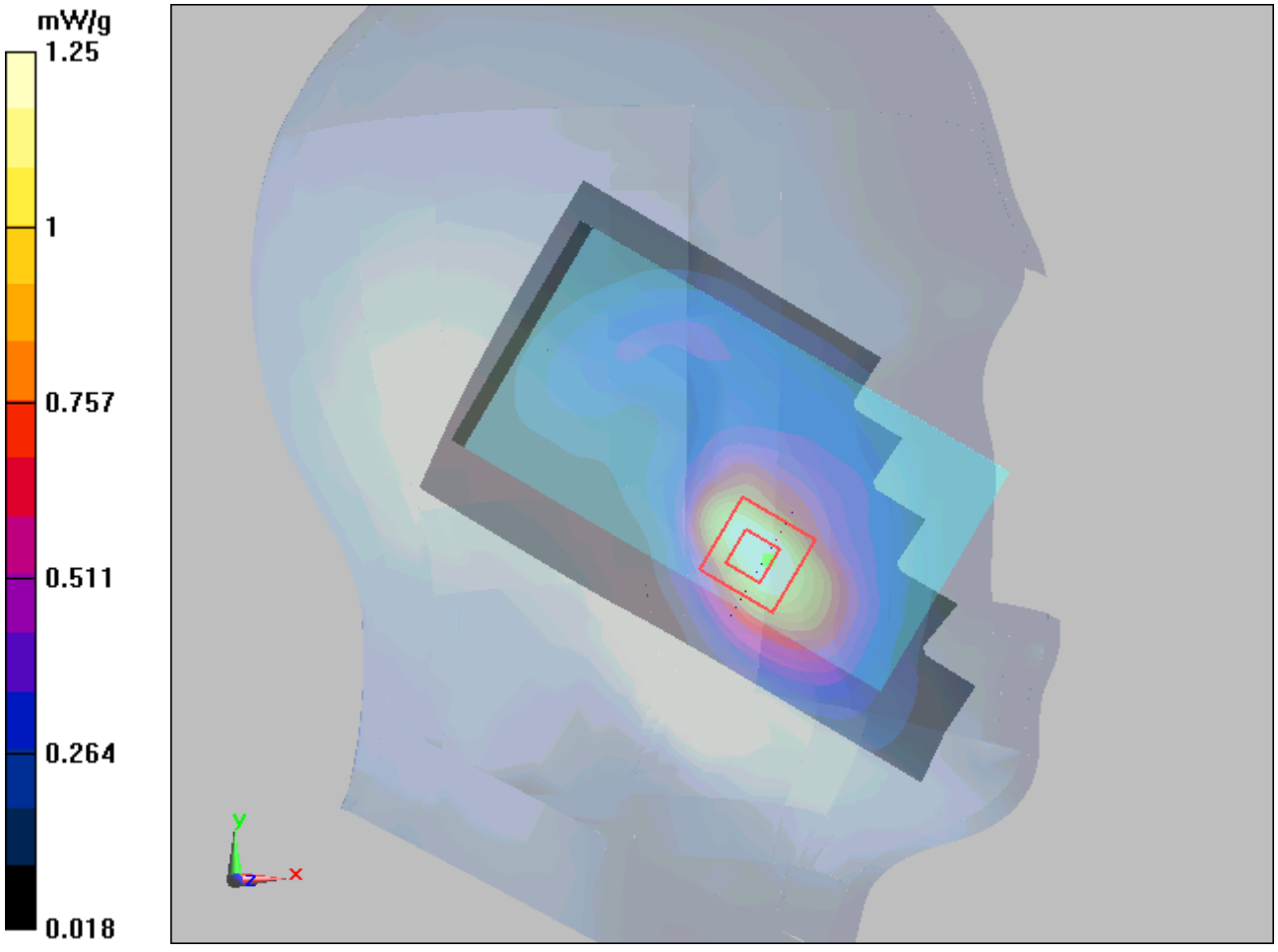
Figure 32 CDMA BC1 Left Hand Touch Cheek Channel 600

CDMA BC1 Left Cheek Low (Battery 1, Full Power)

Date/Time: 2/24/2013 7:17:59 PM
Communication System: CDMA ; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.26 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.3 V/m; Power Drift = -0.095 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.690 mW/g
Maximum value of SAR (measured) = 1.25 mW/g



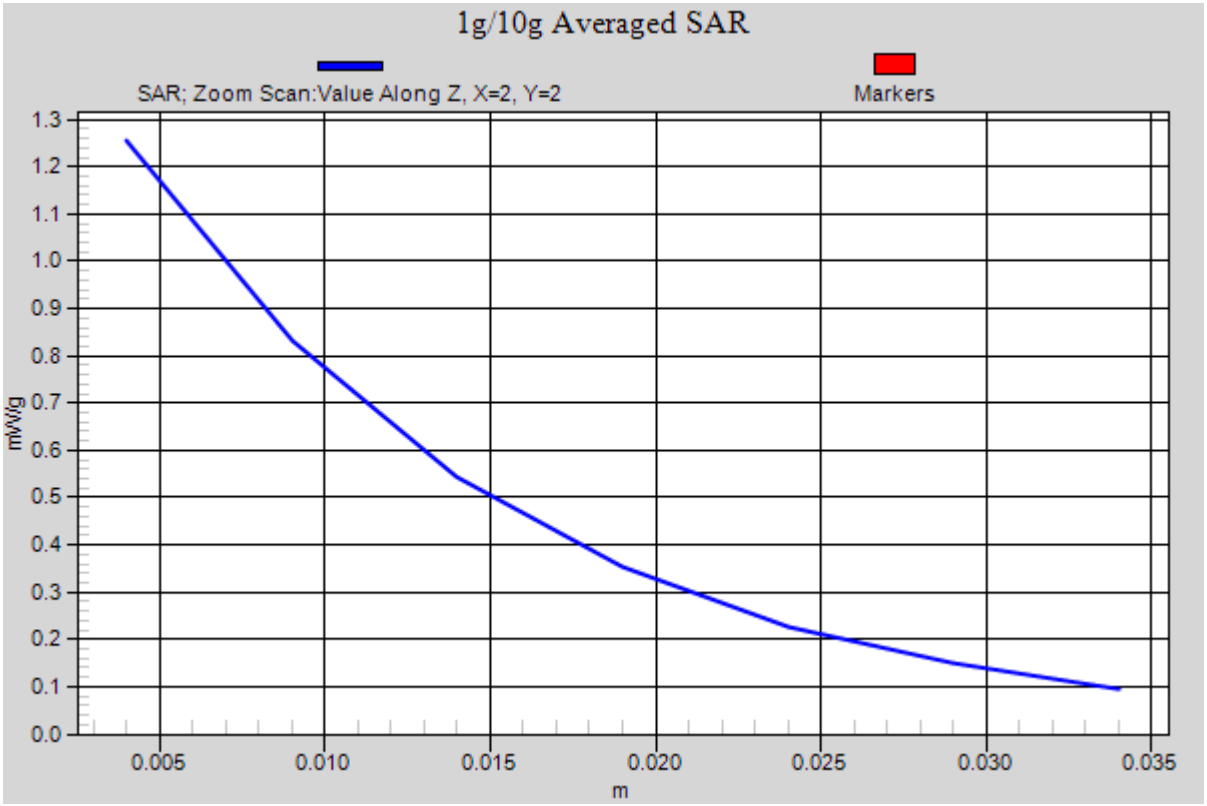


Figure 33 CDMA BC1 Left Hand Touch Cheek Channel 25

CDMA BC1 Left Tilt Middle (Battery 1, Full Power)

Date/Time: 2/24/2013 7:33:37 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.439 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.2 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 0.629 W/kg
SAR(1 g) = 0.382 mW/g; SAR(10 g) = 0.224 mW/g
Maximum value of SAR (measured) = 0.411 mW/g

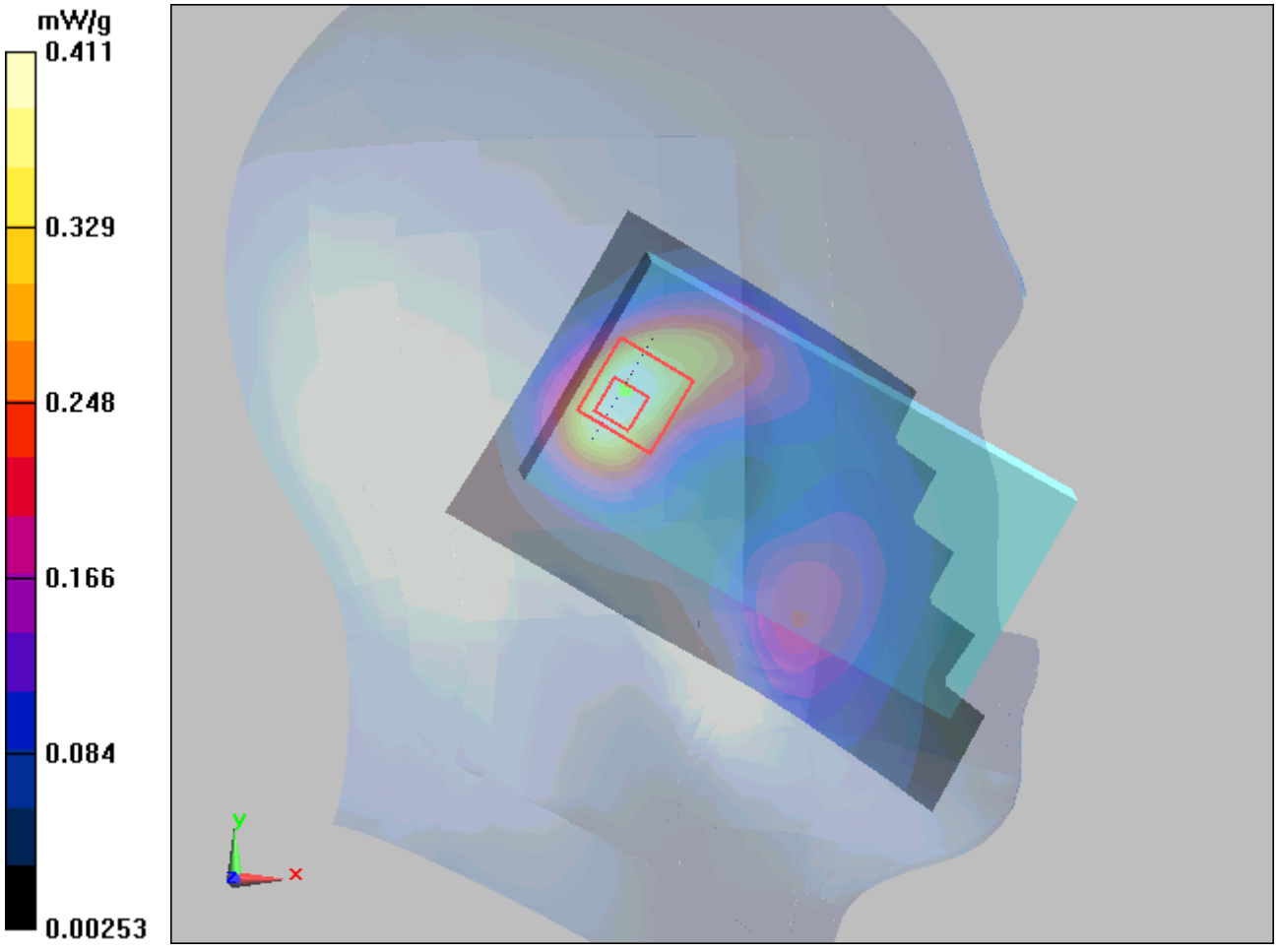


Figure 34 CDMA BC1 Left Hand Tilt 15° Channel 600

CDMA BC1 Right Cheek Middle (Battery 1, Full Power)

Date/Time: 2/24/2013 7:49:18 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.604 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = 0.106 dB
Peak SAR (extrapolated) = 0.772 W/kg
SAR(1 g) = 0.544 mW/g; SAR(10 g) = 0.366 mW/g
Maximum value of SAR (measured) = 0.563 mW/g

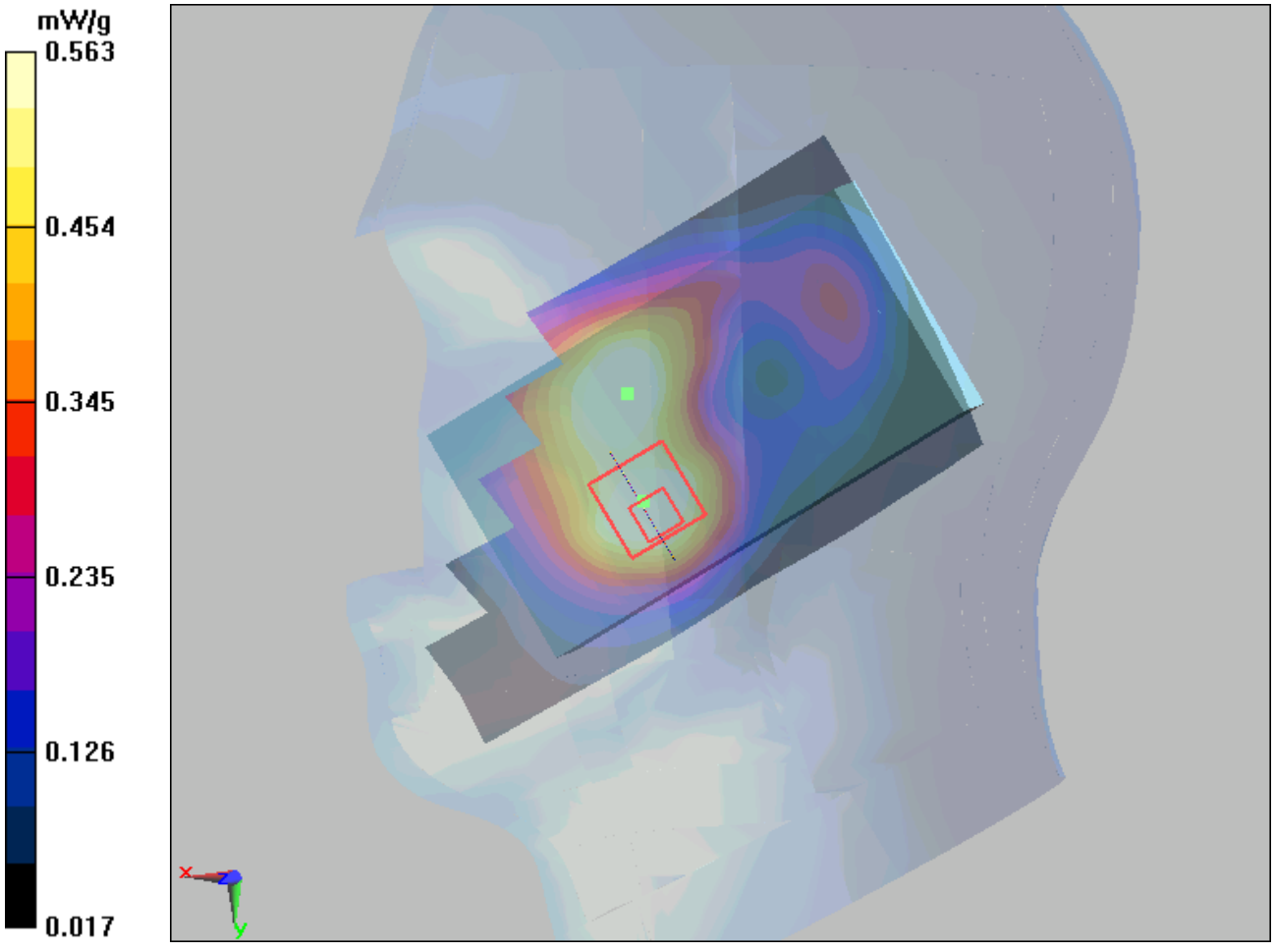


Figure 35 CDMA BC1 Right Hand Touch Cheek Channel 600

CDMA BC1 Right Tilt Middle (Battery 1, Full Power)

Date/Time: 2/24/2013 8:06:54 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.512 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.7 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 0.745 W/kg
SAR(1 g) = 0.443 mW/g; SAR(10 g) = 0.247 mW/g
Maximum value of SAR (measured) = 0.499 mW/g

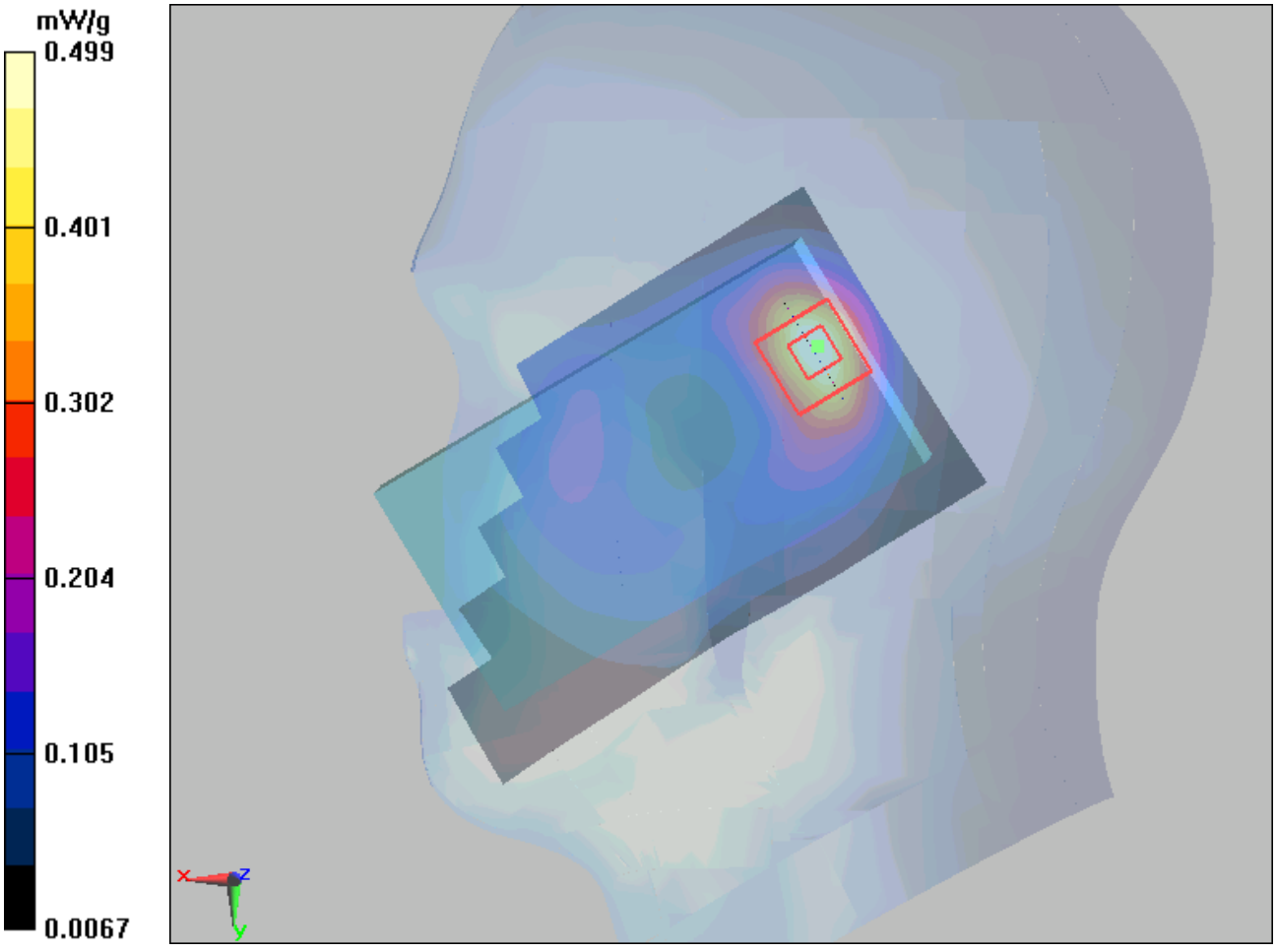


Figure 36 CDMA BC1 Right Hand Tilt 15° Channel 600

CDMA BC1 Left Cheek Low (Battery 1, Full Power, 1X Advance)

Date/Time: 2/24/2013 11:21:59 PM
Communication System: CDMA ; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.1 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.064 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.603 mW/g
Maximum value of SAR (measured) = 1.09 mW/g

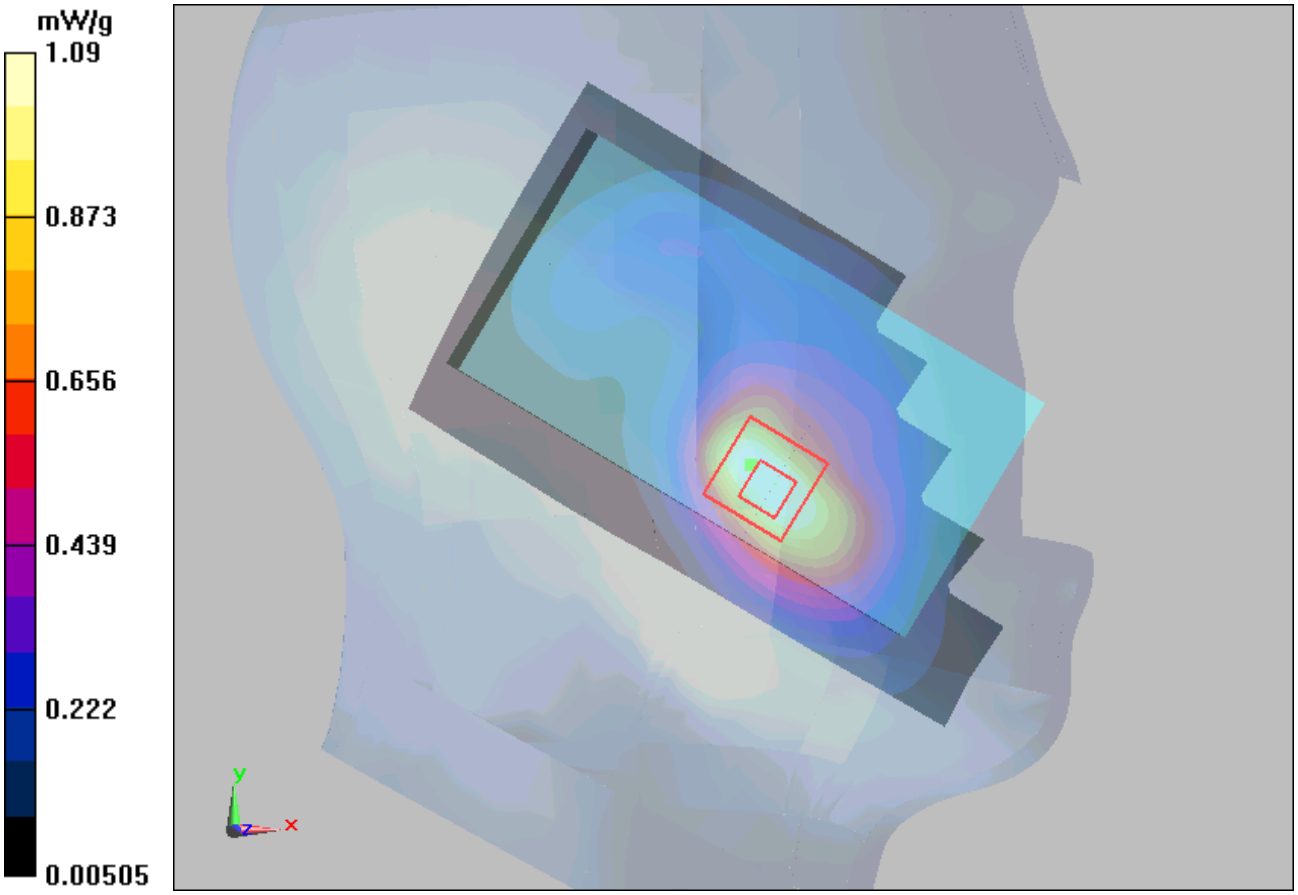


Figure 37 CDMA BC1 Left Hand Touch Cheek Channel 25

CDMA BC1 Left Cheek Low (Battery 2, Full Power)

Date/Time: 2/24/2013 8:21:46 PM
Communication System: CDMA ; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.27 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.3 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 1.74 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.667 mW/g
Maximum value of SAR (measured) = 1.24 mW/g

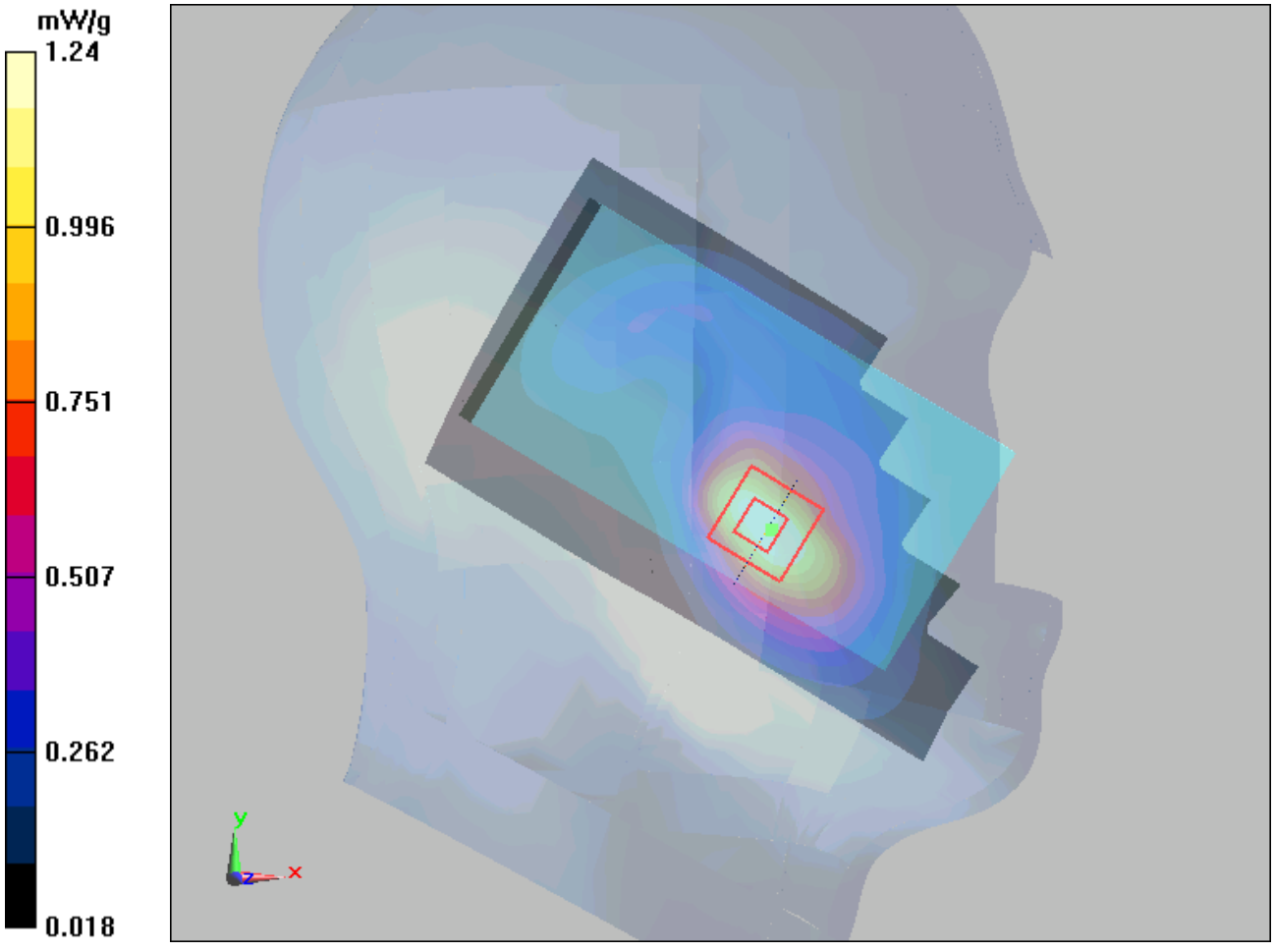


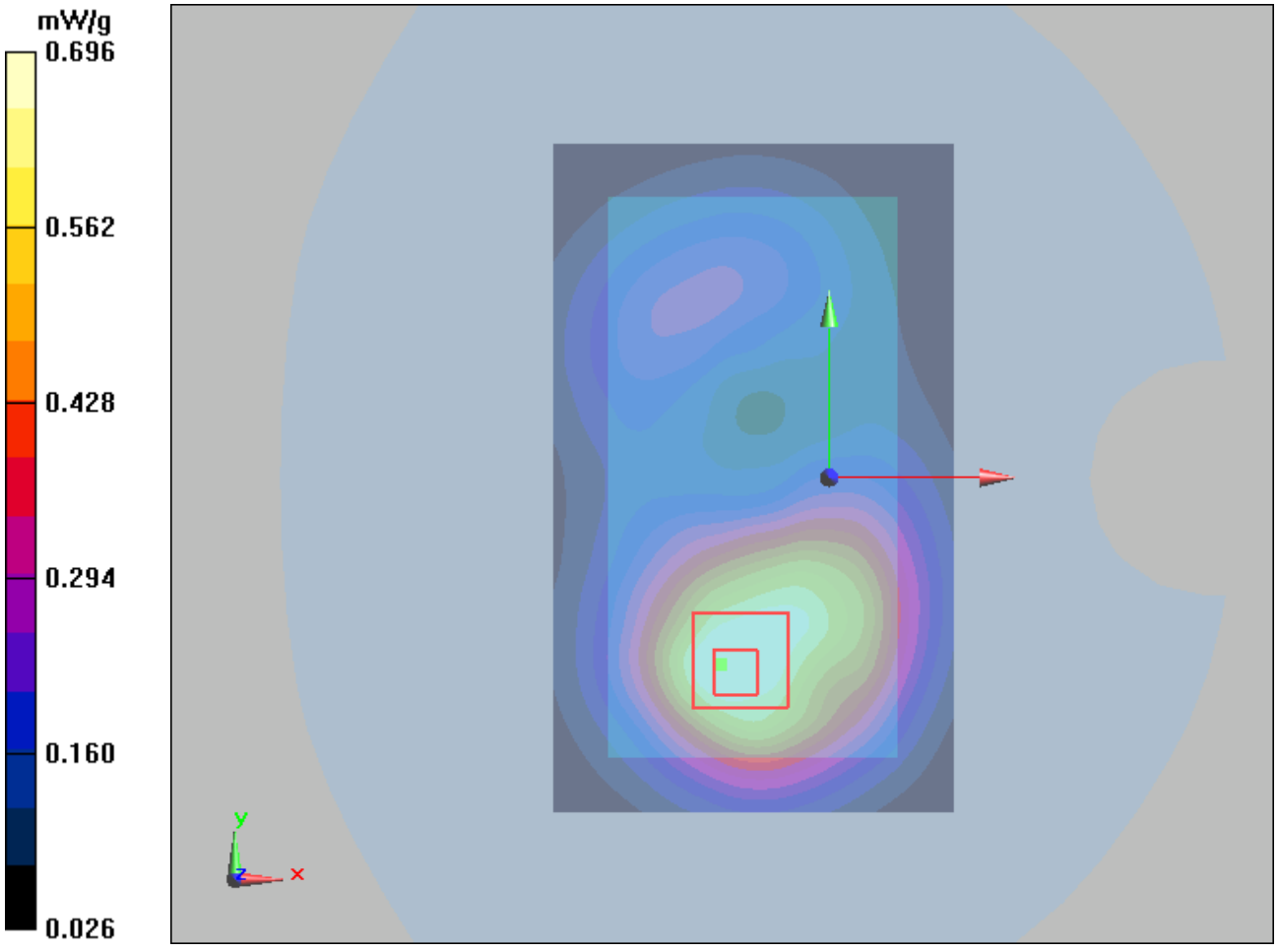
Figure 38 CDMA BC1 Left Hand Touch Cheek Channel 25

CDMA BC1 Back Side Middle (Battery 1, Full Power)

Date/Time: 2/25/2013 10:11:04 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back Side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.722 mW/g

Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.56 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 0.993 W/kg
SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.431 mW/g
Maximum value of SAR (measured) = 0.696 mW/g



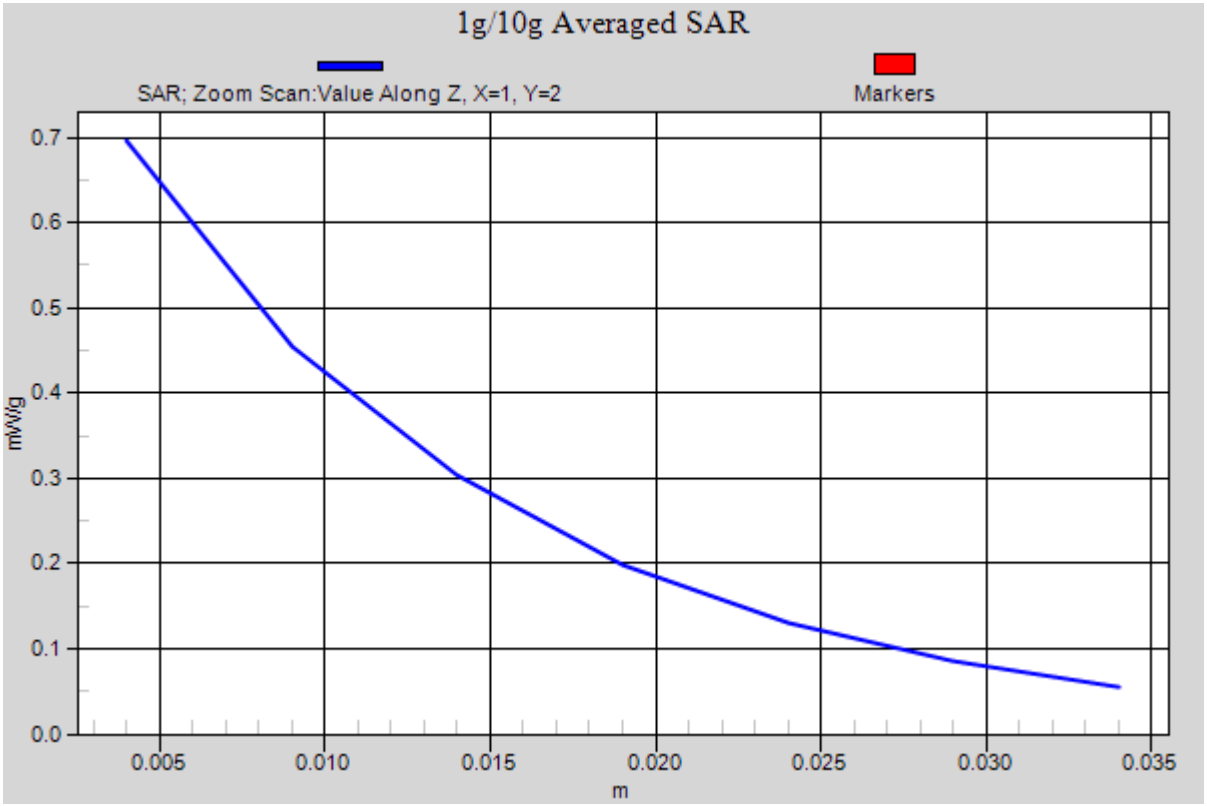


Figure 39 Body, CDMA BC1 Back Side Channel 600

CDMA BC1 Front Side Middle (Battery 1, Full Power)

Date/Time: 2/25/2013 9:53:08 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front Side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.706 mW/g

Front Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.28 V/m; Power Drift = -0.126 dB
Peak SAR (extrapolated) = 0.971 W/kg
SAR(1 g) = 0.642 mW/g; SAR(10 g) = 0.414 mW/g
Maximum value of SAR (measured) = 0.674 mW/g

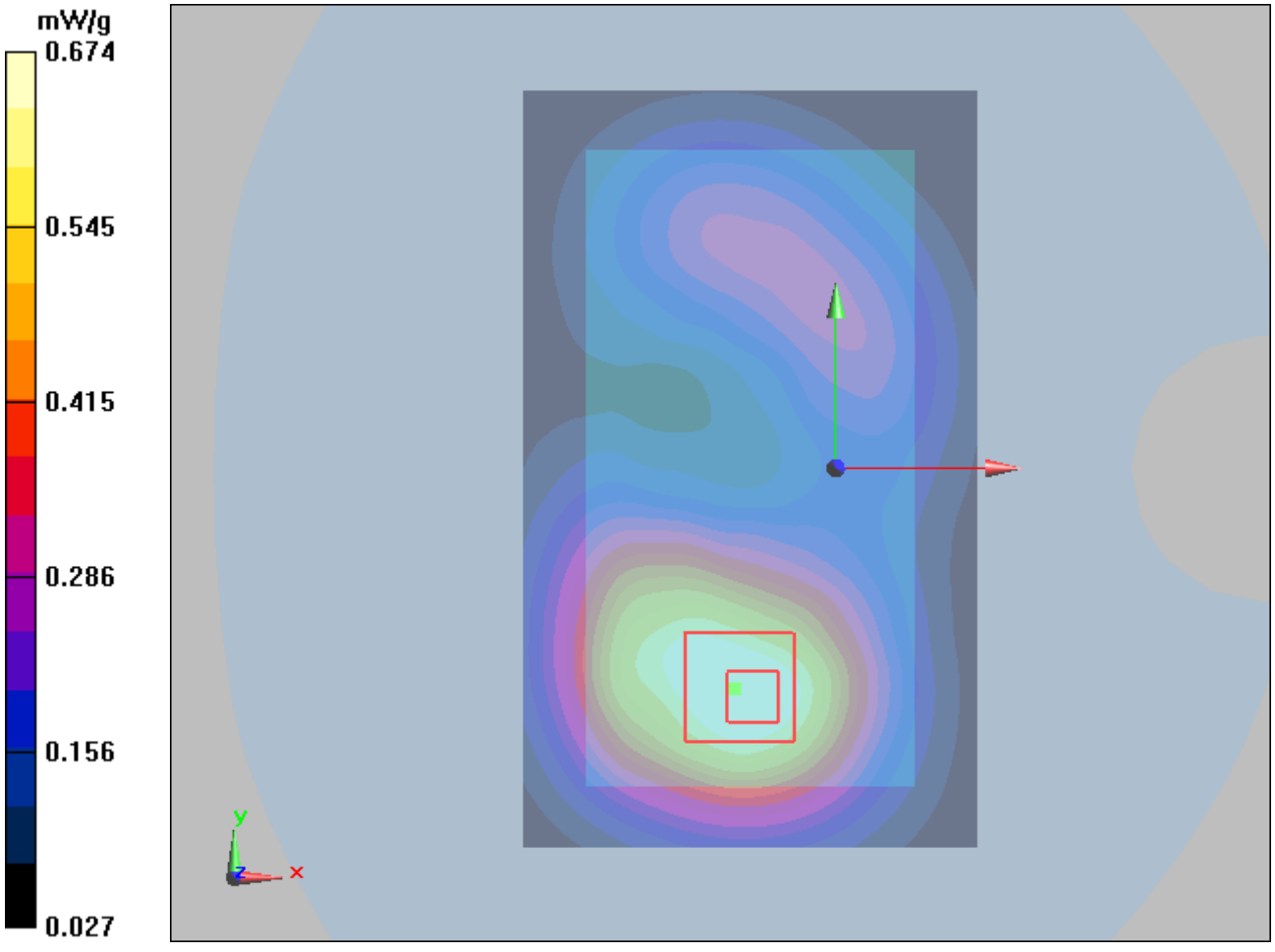


Figure 40 Body, CDMA BC1 Front Side Channel 600

CDMA BC1 Back Side Middle (Battery 2, Full Power)

Date/Time: 2/25/2013 11:02:27 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.695 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.2 V/m; Power Drift = -0.038 dB
Peak SAR (extrapolated) = 0.971 W/kg
SAR(1 g) = 0.638 mW/g; SAR(10 g) = 0.405 mW/g
Maximum value of SAR (measured) = 0.666 mW/g

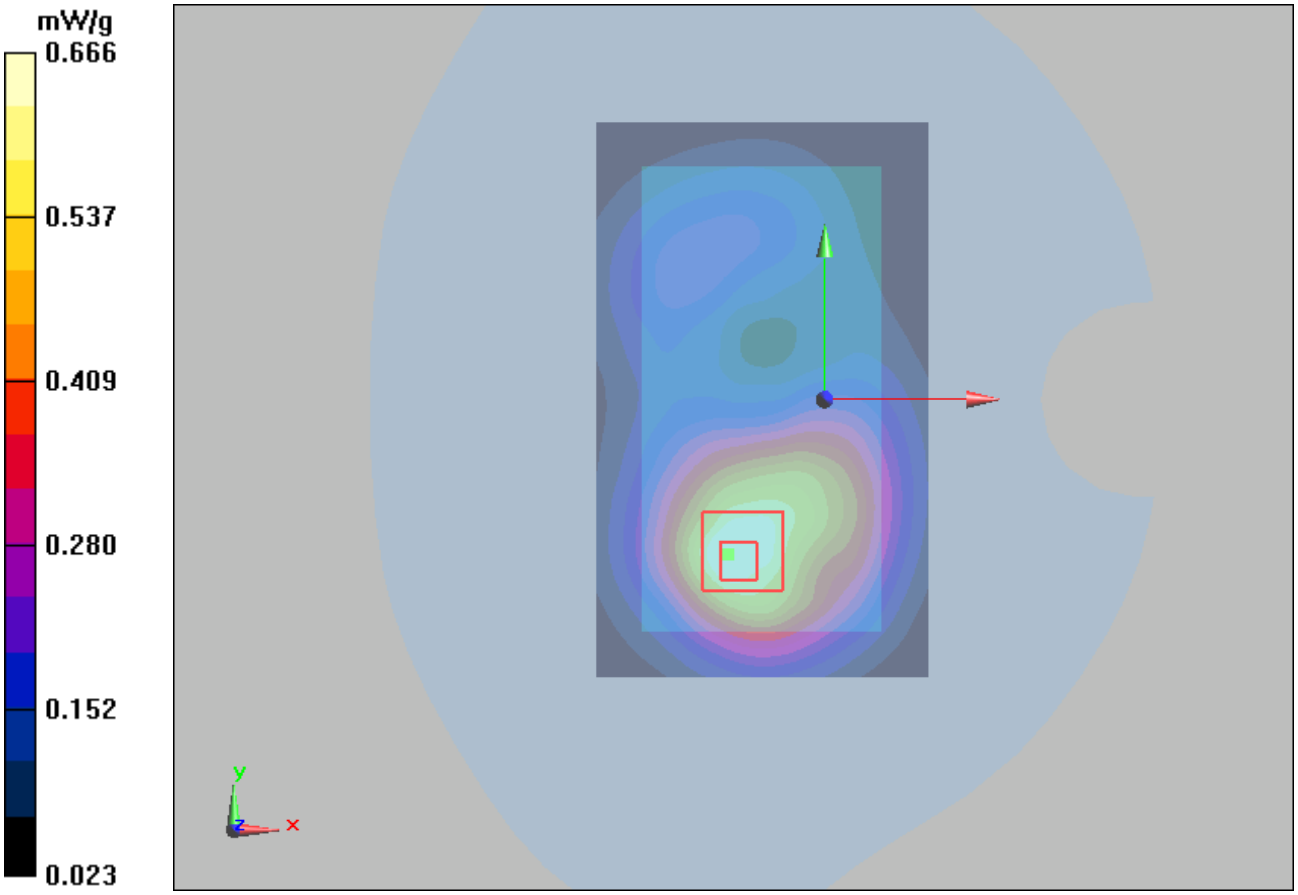


Figure 41 Body, CDMA BC1 Back Side Channel 600

CDMA BC1 Left Cheek Low (Battery 1, Full Power, 1st Repeated Test)

Date/Time: 2/24/2013 8:37:45 PM

Communication System: CDMA ; Frequency: 1851.25 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.11 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.1 V/m; Power Drift = -0.00537 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.606 mW/g

Maximum value of SAR (measured) = 1.09 mW/g

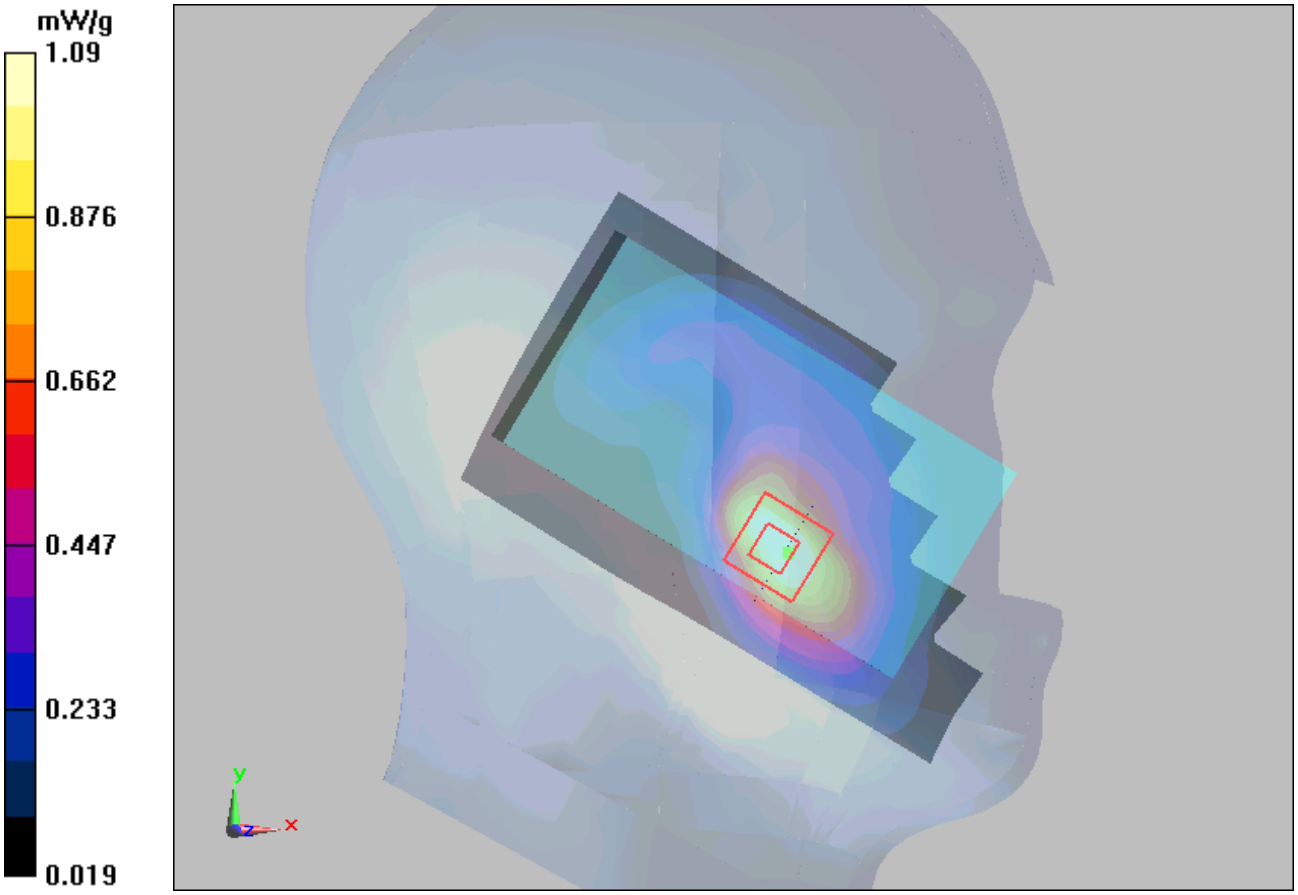


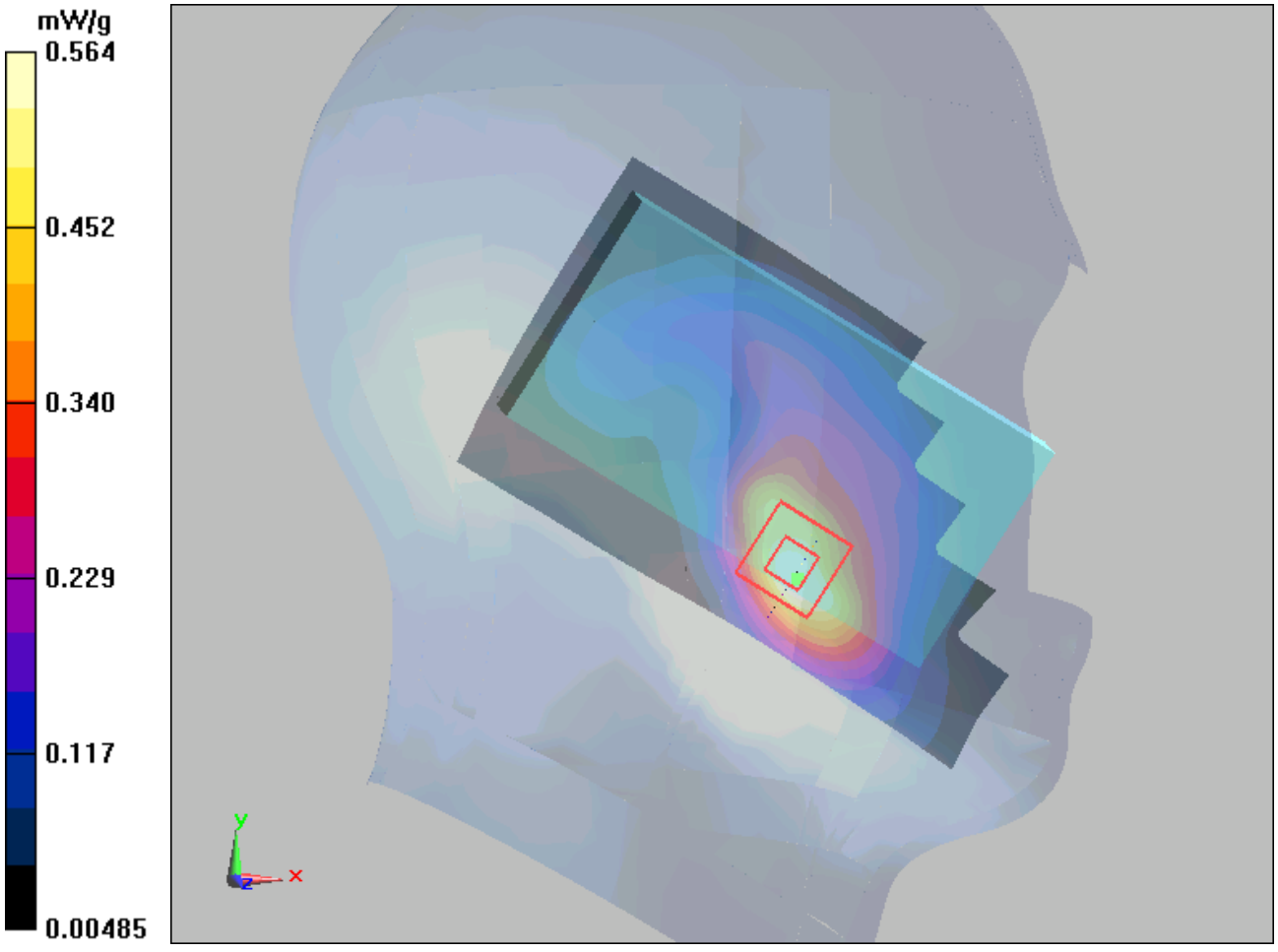
Figure 42 CDMA BC1 Left Hand Touch Cheek Channel 25

CDMA BC1 Left Cheek Middle (Battery 1, Power=21dBm)

Date/Time: 2/24/2013 8:55:45 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.582 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.61 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.814 W/kg
SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.312 mW/g
Maximum value of SAR (measured) = 0.564 mW/g



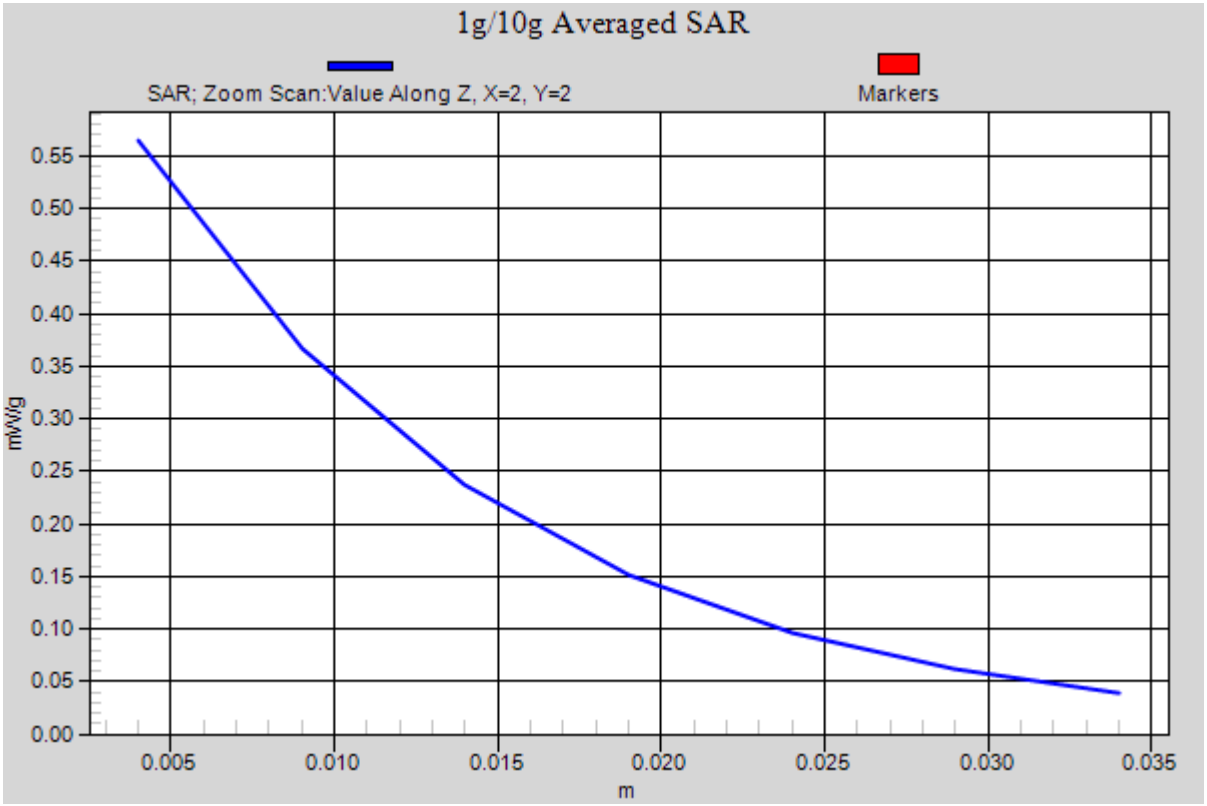


Figure 43 CDMA BC1 Left Hand Touch Cheek Channel 600

CDMA BC1 Left Tilt Middle (Battery 1, Power=21dBm)

Date/Time: 2/24/2013 9:12:33 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.224 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.6 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.116 mW/g
Maximum value of SAR (measured) = 0.226 mW/g

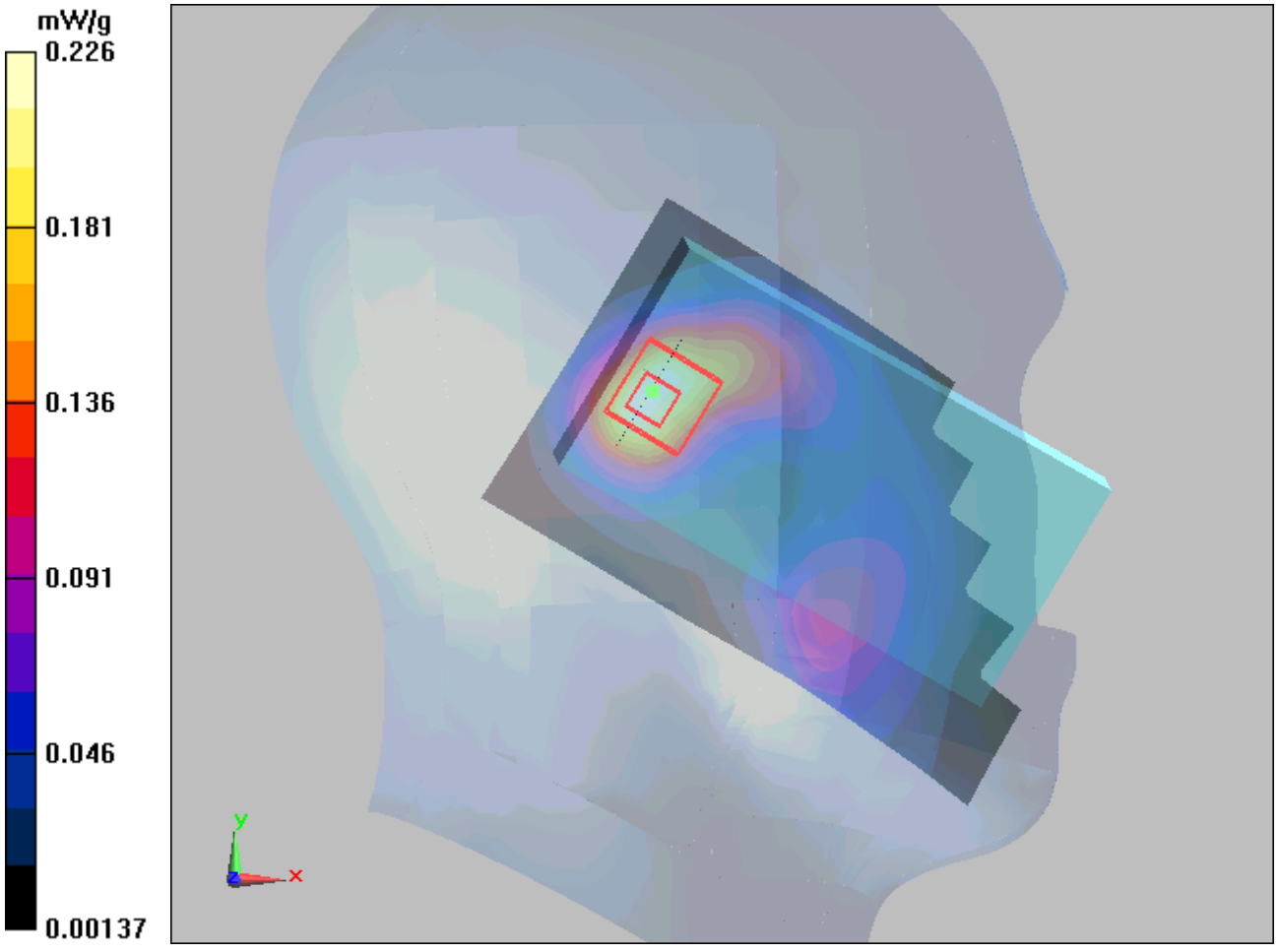


Figure 44 CDMA BC1 Left Hand Tilt 15° Channel 600

CDMA BC1 Right Cheek Middle (Battery 1, Power=21dBm)

Date/Time: 2/24/2013 9:28:20 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.320 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.35 V/m; Power Drift = 0.113 dB
Peak SAR (extrapolated) = 0.430 W/kg
SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.185 mW/g
Maximum value of SAR (measured) = 0.304 mW/g

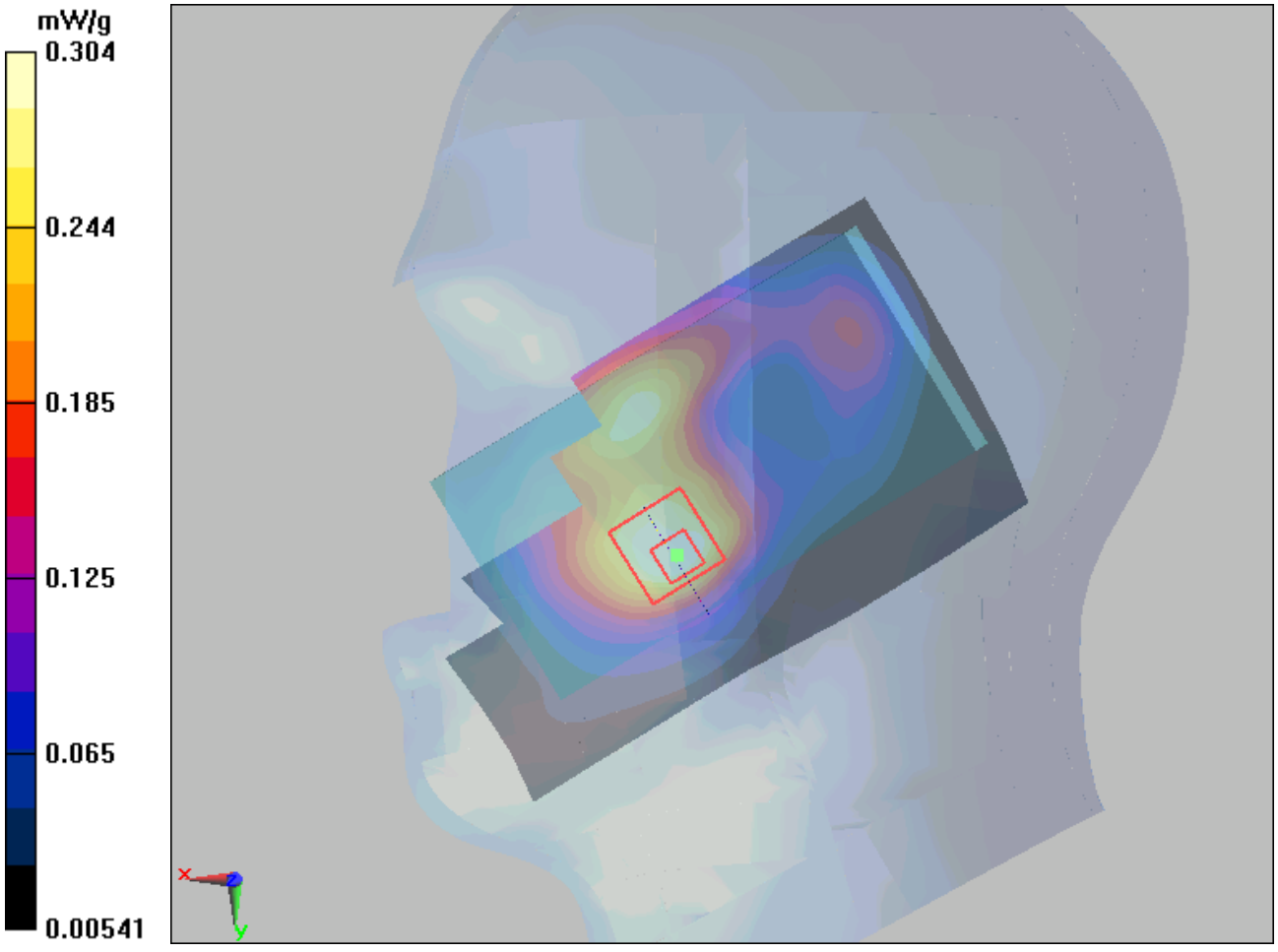


Figure 45 CDMA BC1 Right Hand Touch Cheek Channel 600

CDMA BC1 Right Tilt Middle (Battery 1, Power=21dBm)

Date/Time: 2/24/2013 9:44:58 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.257 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.124 mW/g
Maximum value of SAR (measured) = 0.258 mW/g

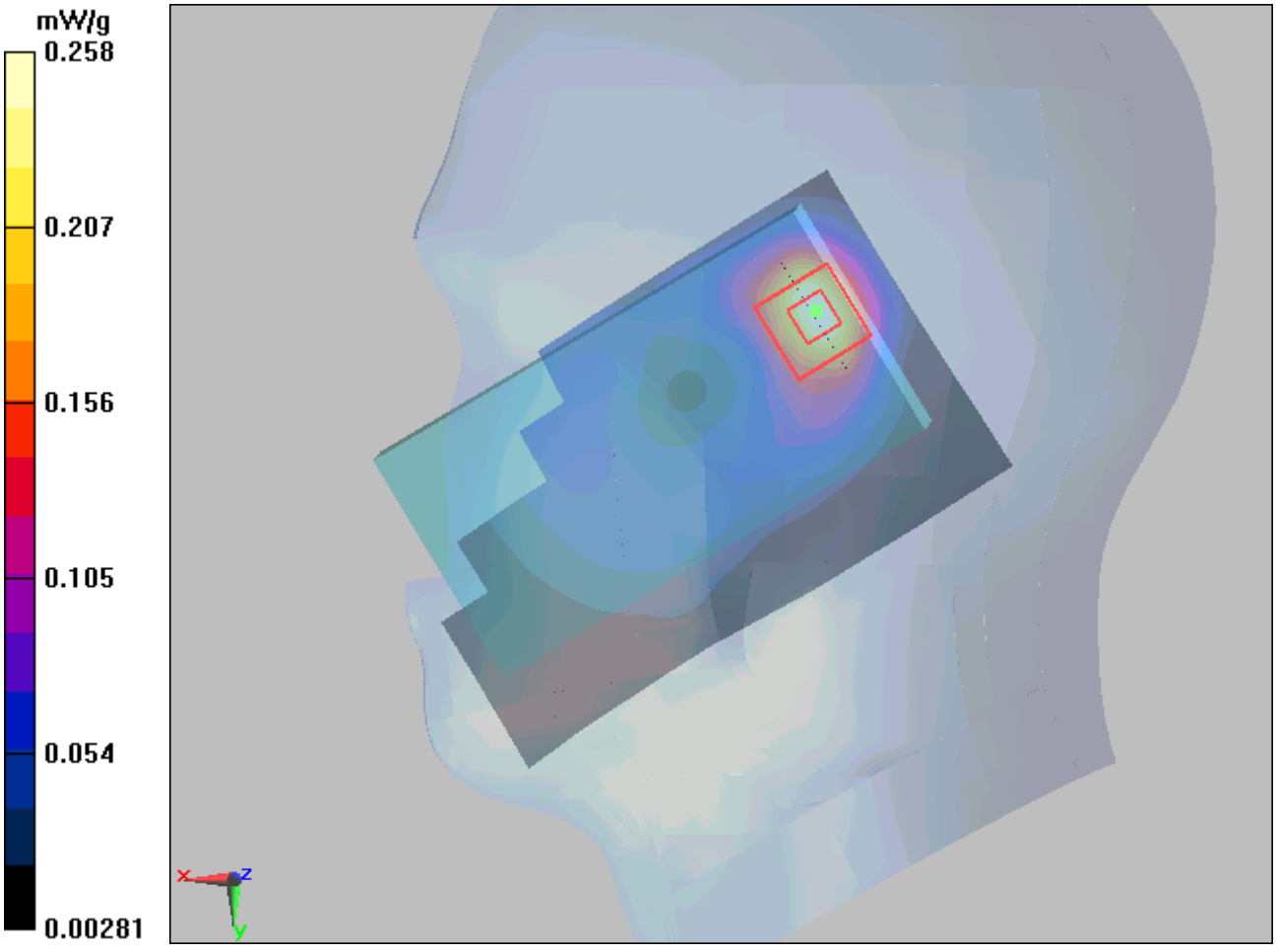


Figure 46 CDMA BC1 Right Hand Tilt 15° Channel 600

CDMA BC1 Left Cheek Middle (Battery 2, Power=21dBm)

Date/Time: 2/24/2013 10:03:08 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.580 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.07 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 0.809 W/kg
SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.310 mW/g
Maximum value of SAR (measured) = 0.554 mW/g

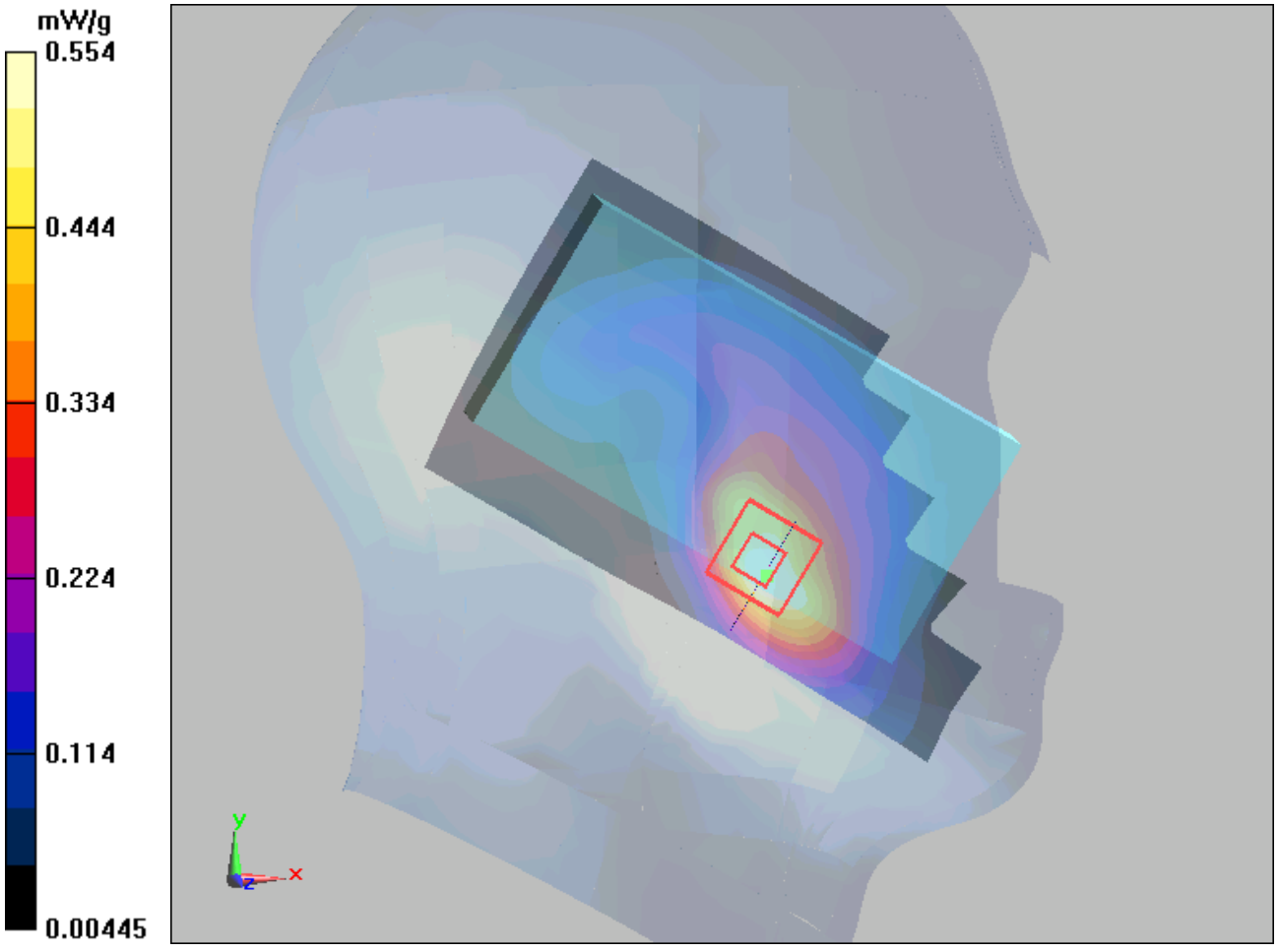


Figure 47 CDMA BC1 Left Hand Touch Cheek Channel 600

CDMA BC1 Back Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/25/2013 2:02:16 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.341 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.19 V/m; Power Drift = 0.110 dB
Peak SAR (extrapolated) = 0.490 W/kg
SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.204 mW/g
Maximum value of SAR (measured) = 0.344 mW/g

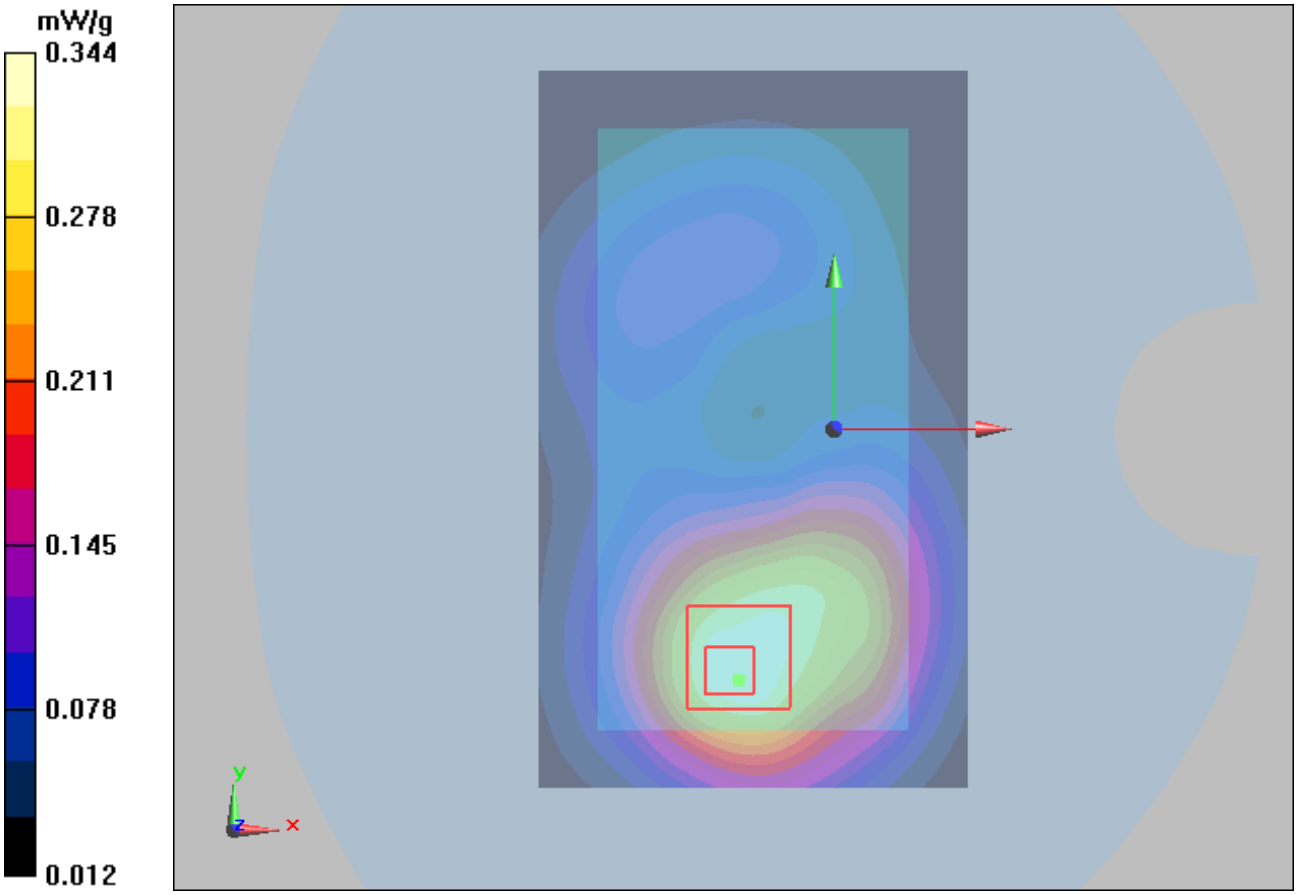


Figure 48 Body, CDMA BC1 Back Side Channel 600

CDMA BC1 Front Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/25/2013 2:21:08 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.304 mW/g

Front side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.08 V/m; Power Drift = 0.00139 dB
Peak SAR (extrapolated) = 0.427 W/kg
SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.180 mW/g
Maximum value of SAR (measured) = 0.296 mW/g

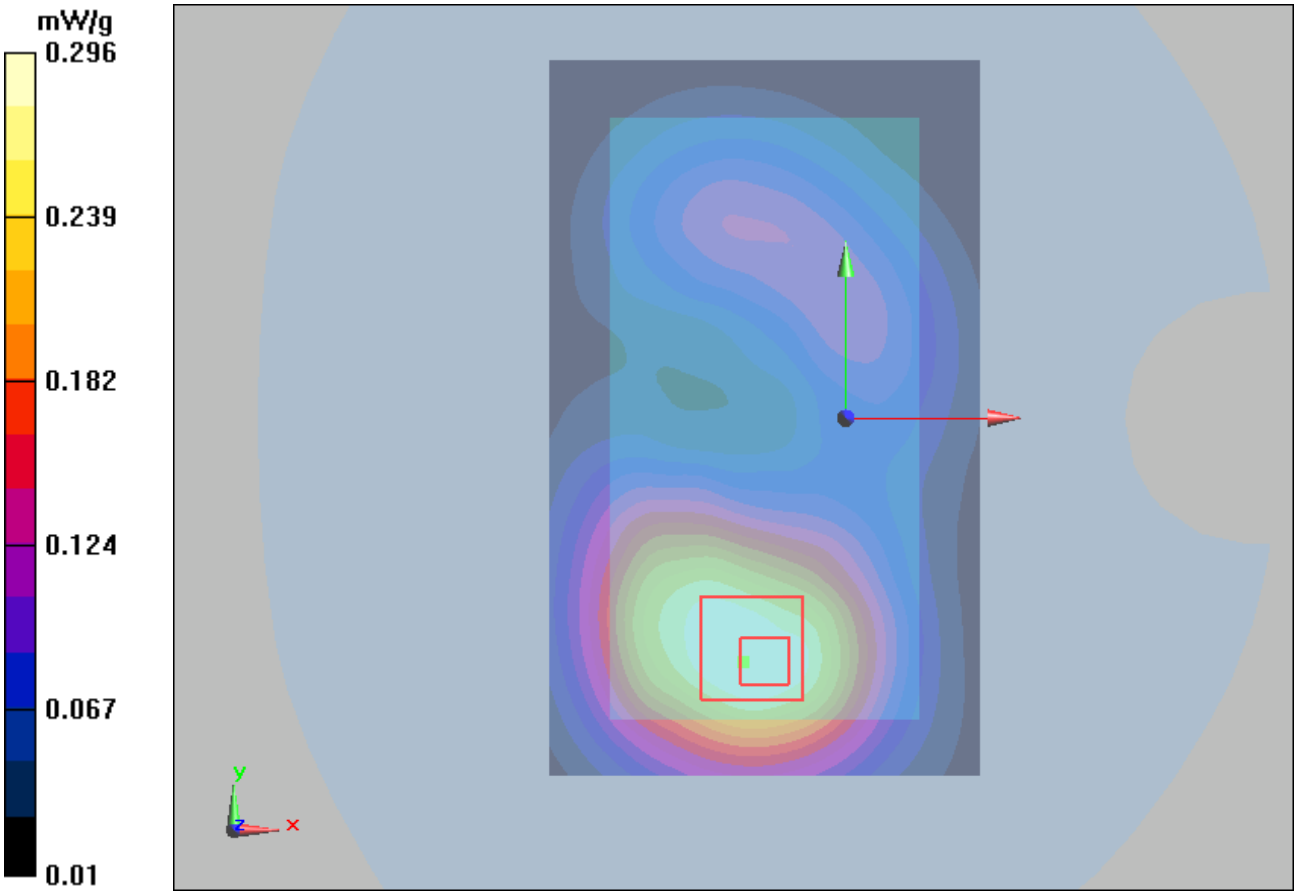


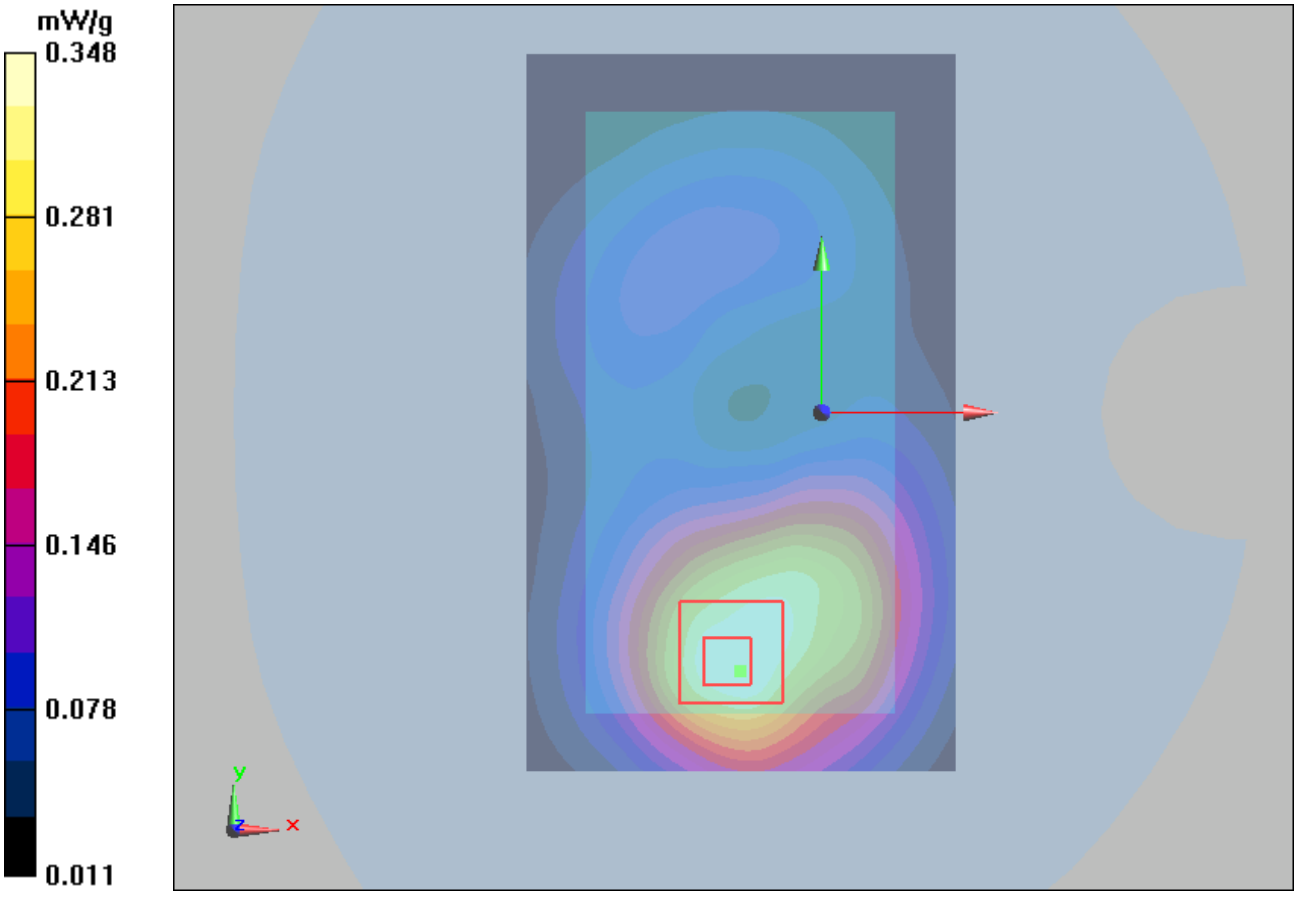
Figure 49 Body, CDMA BC1 Front Side Channel 600

CDMA BC1 Back Side Middle (Battery 2, Power=21dBm)

Date/Time: 2/25/2013 2:40:32 PM
Communication System: CDMA ; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.5 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.355 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.97 V/m; Power Drift = 0.123 dB
Peak SAR (extrapolated) = 0.501 W/kg
SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.208 mW/g
Maximum value of SAR (measured) = 0.348 mW/g



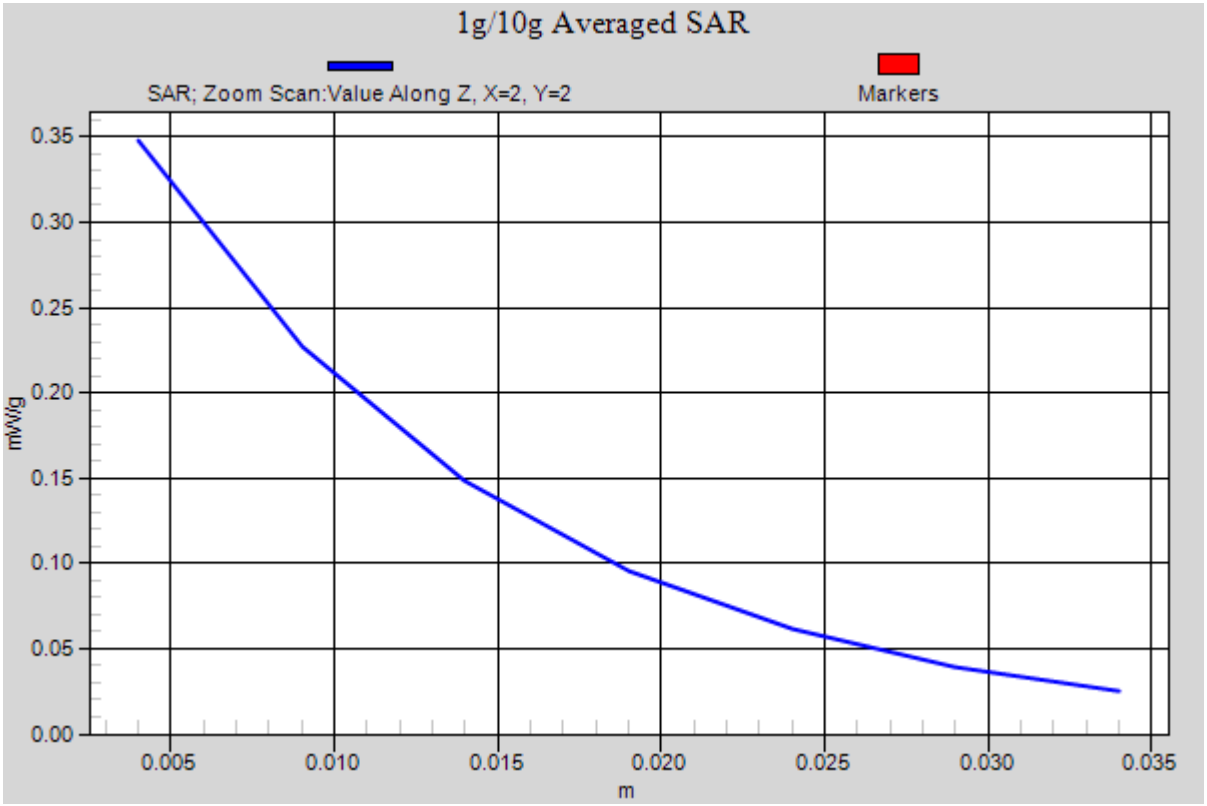


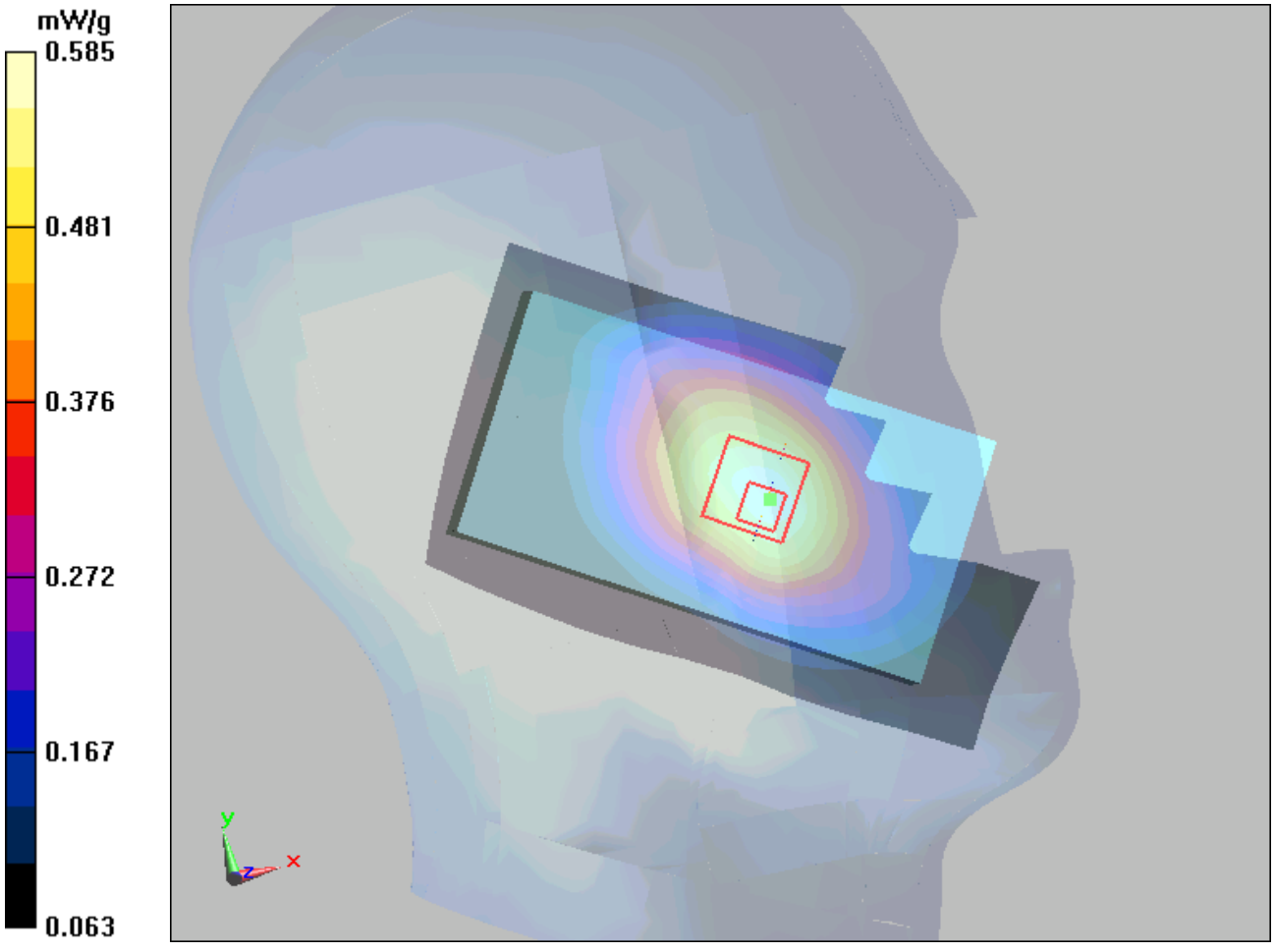
Figure 50 Body, CDMA BC1 Back Side Channel 600

CDMA BC10 Left Cheek Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 3:46:43 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.577 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.92 V/m; Power Drift = 0.163 dB
Peak SAR (extrapolated) = 0.702 W/kg
SAR(1 g) = 0.547 mW/g; SAR(10 g) = 0.410 mW/g
Maximum value of SAR (measured) = 0.585 mW/g



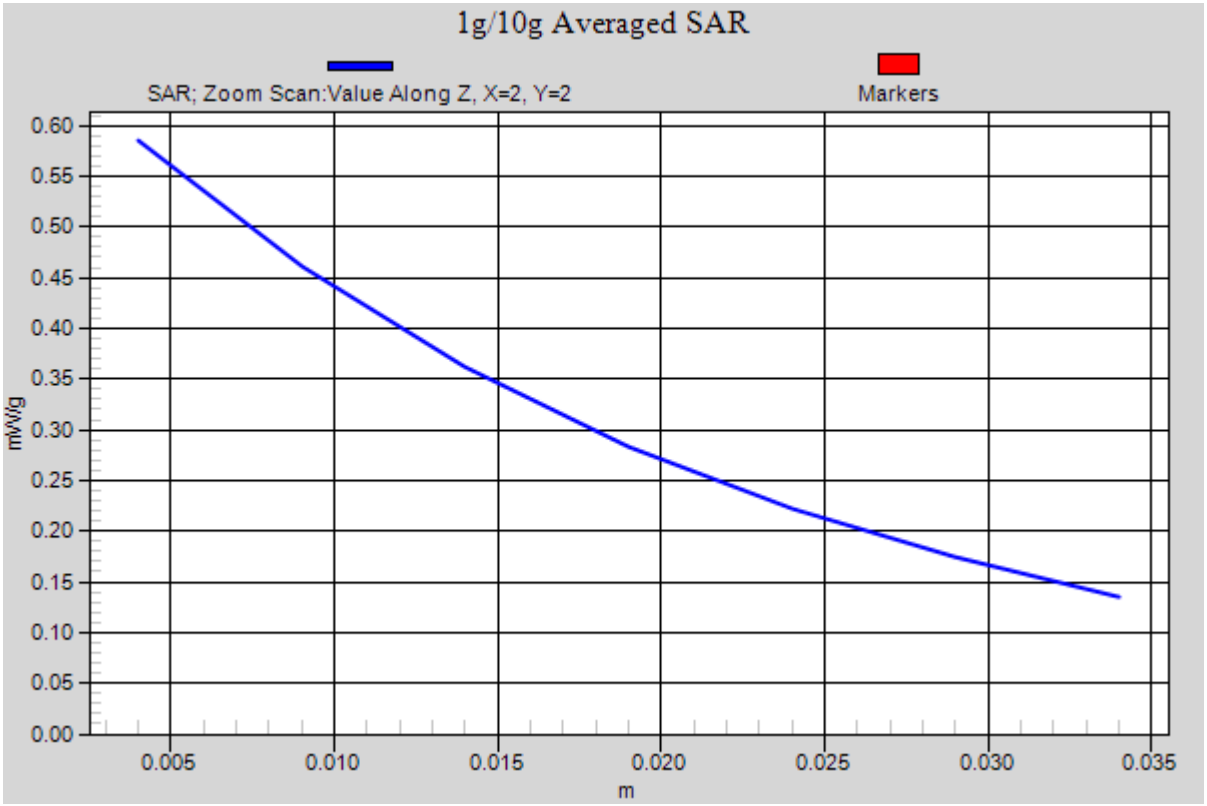


Figure 51 CDMA BC10 Left Hand Touch Cheek Channel 580

CDMA BC10 Left Tilt Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 4:49:53 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.371 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.072 dB
Peak SAR (extrapolated) = 0.433 W/kg
SAR(1 g) = 0.348 mW/g; SAR(10 g) = 0.265 mW/g
Maximum value of SAR (measured) = 0.369 mW/g

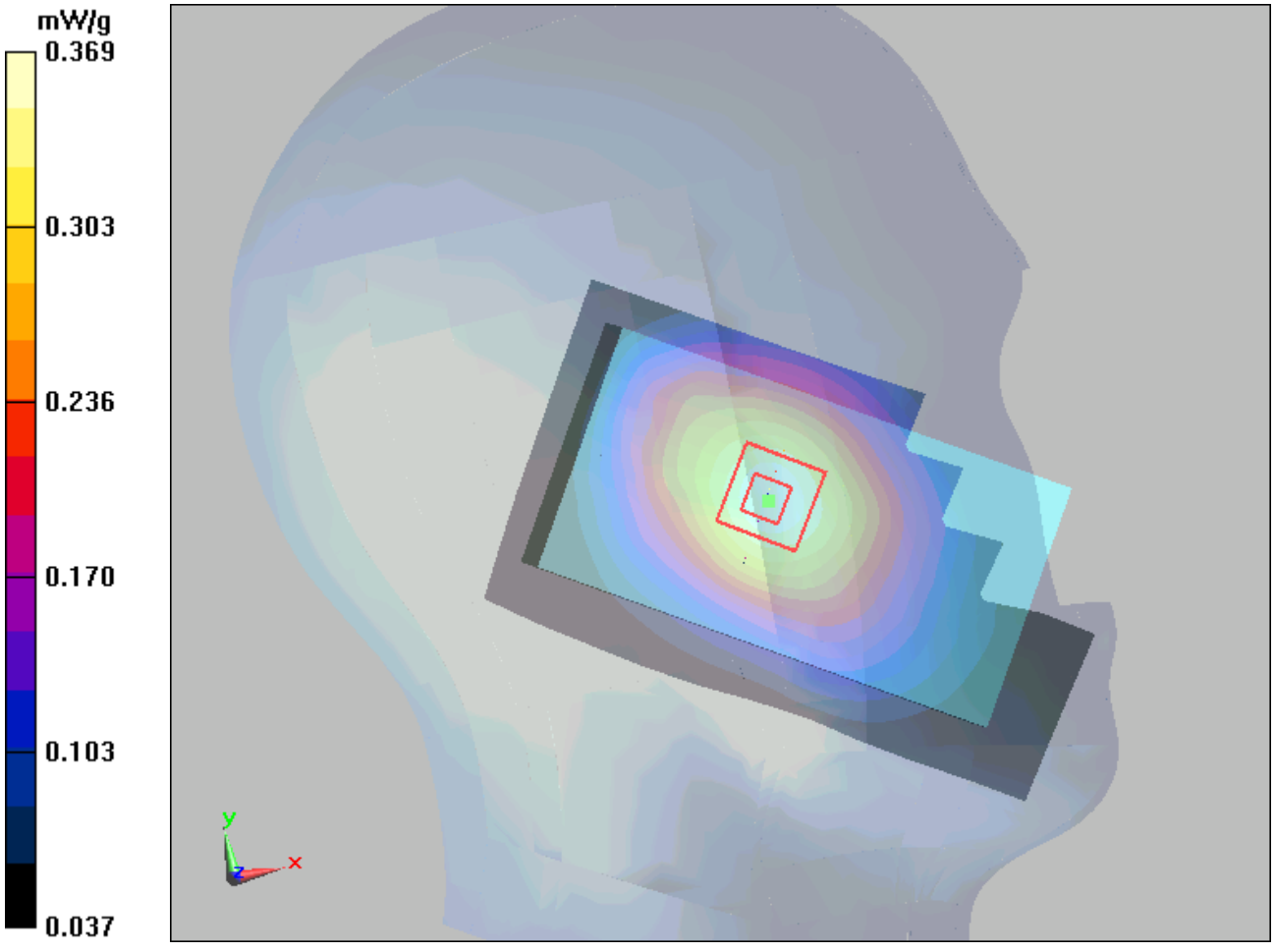


Figure 52 CDMA BC10 Left Hand Tilt 15° Channel 580

CDMA BC10 Right Cheek Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 3:10:44 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.407 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.149 dB
Peak SAR (extrapolated) = 0.481 W/kg
SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.301 mW/g
Maximum value of SAR (measured) = 0.408 mW/g

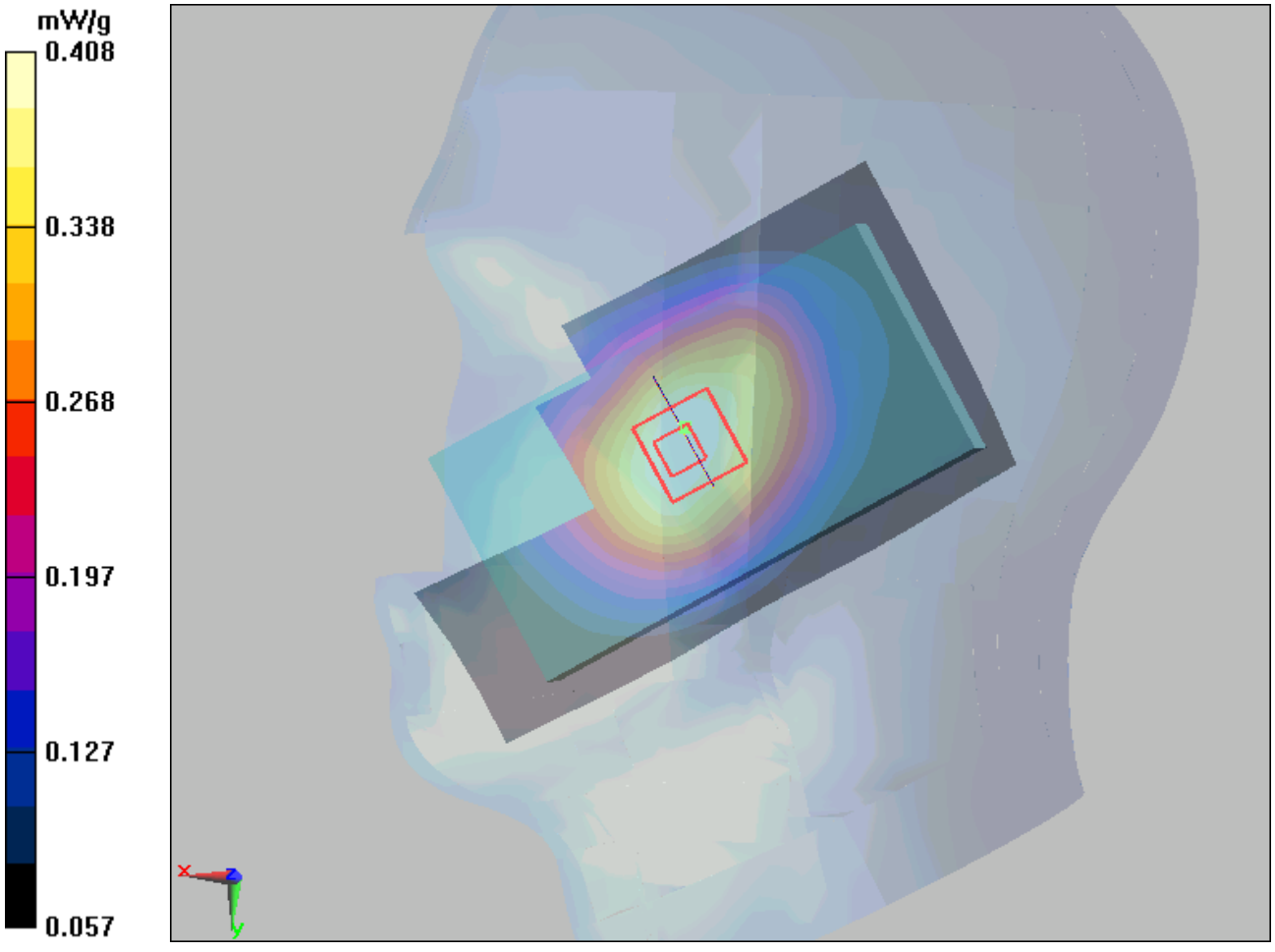


Figure 53 CDMA BC10 Right Hand Touch Cheek Channel 580

CDMA BC10 Right Tilt Middle (Battery 1, Full Power)

Date/Time: 2/5/2013 3:26:17 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.383 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.446 W/kg
SAR(1 g) = 0.367 mW/g; SAR(10 g) = 0.281 mW/g
Maximum value of SAR (measured) = 0.387 mW/g

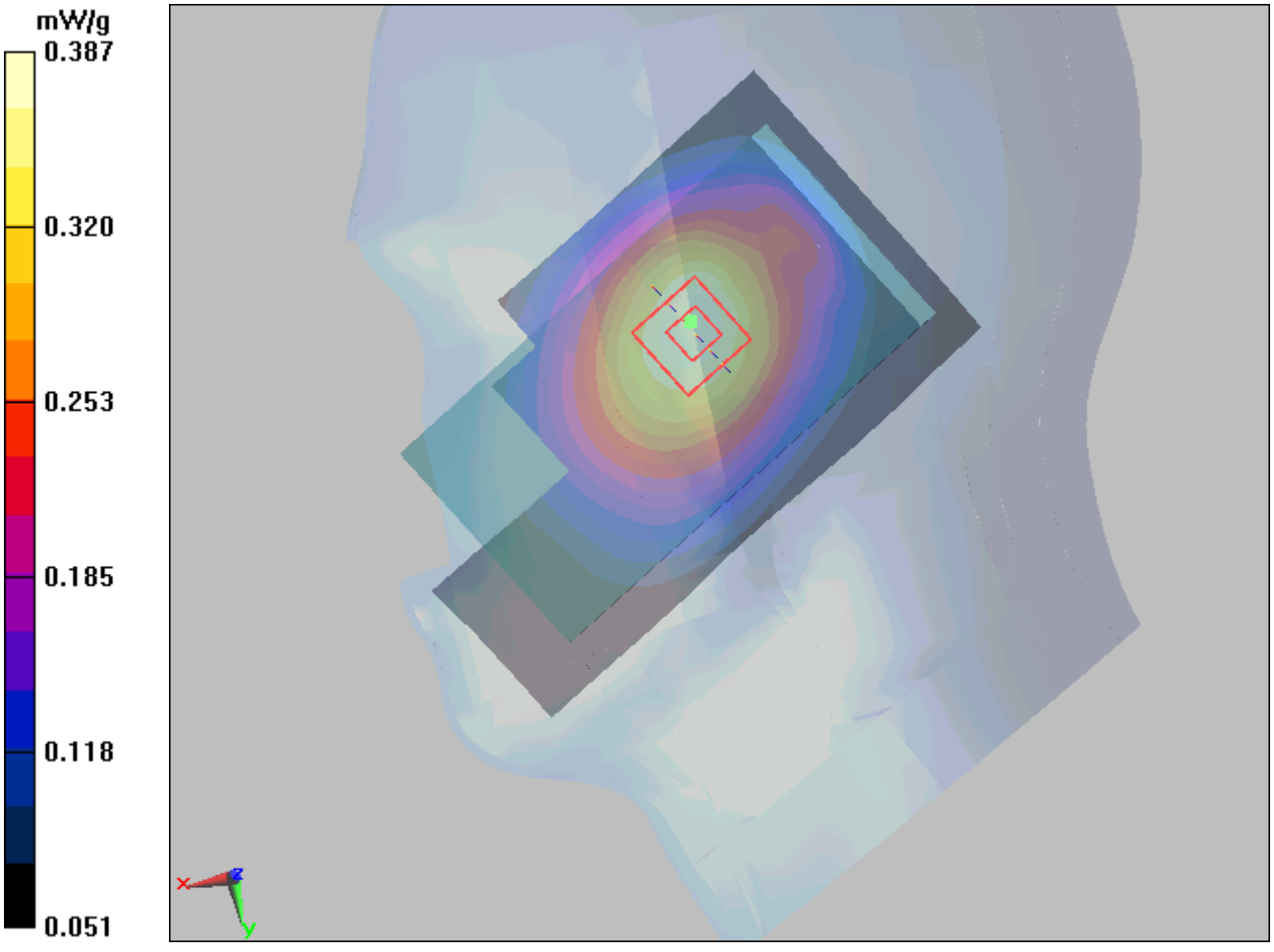


Figure 54 CDMA BC10 Right Hand Tilt 15° Channel 580

CDMA BC10 Left Cheek Middle (Battery 2, Full Power)

Date/Time: 2/5/2013 4:02:27 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.471 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.29 V/m; Power Drift = 0.094 dB
Peak SAR (extrapolated) = 0.601 W/kg
SAR(1 g) = 0.459 mW/g; SAR(10 g) = 0.342 mW/g
Maximum value of SAR (measured) = 0.489 mW/g

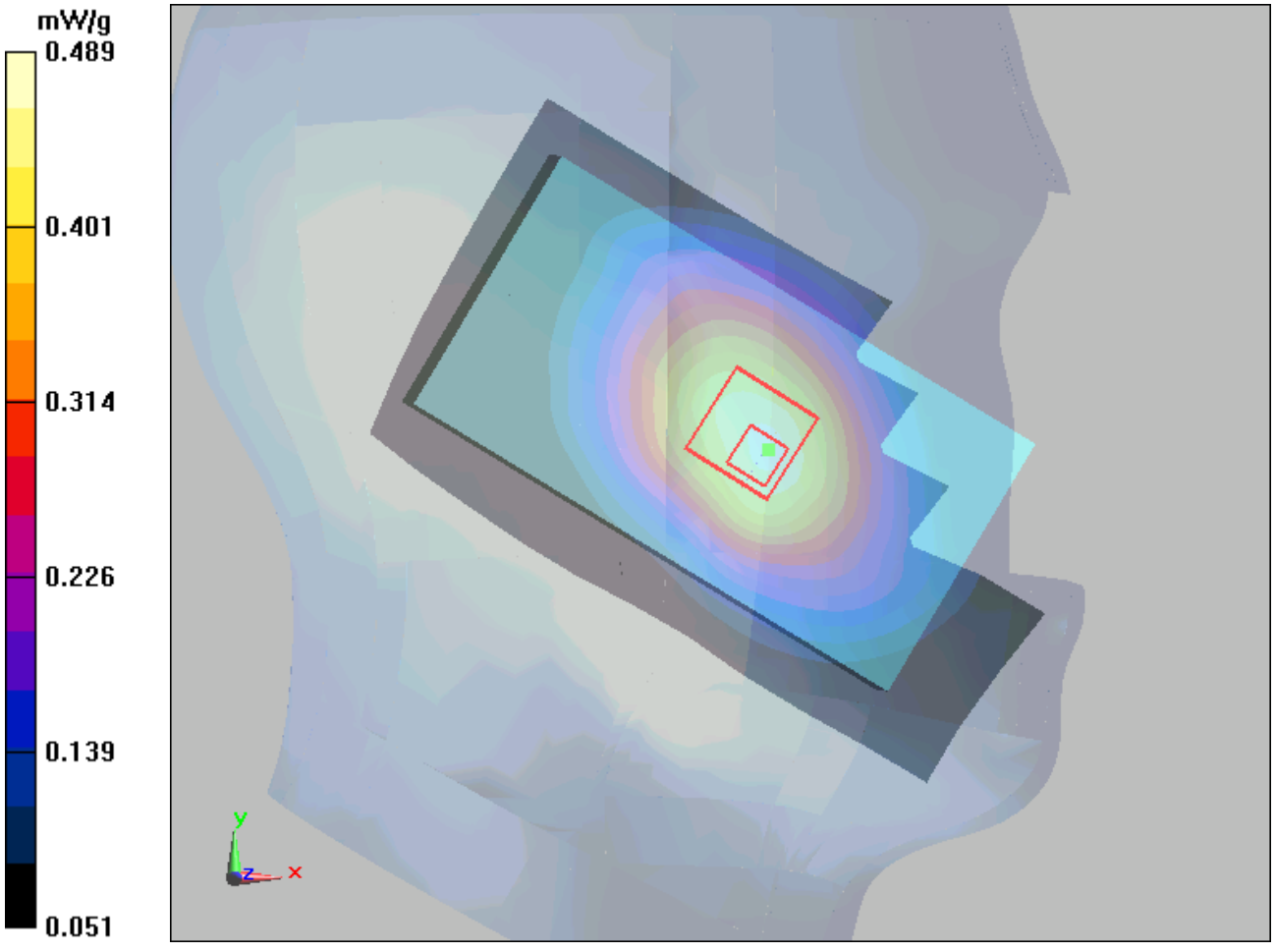


Figure 55 CDMA BC10 Left Hand Touch Cheek Channel 580

CDMA BC10 Back Side Middle (Battery 1, Full Power)

Date/Time: 2/21/2013 9:23:58 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.636 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.1 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.768 W/kg
SAR(1 g) = 0.606 mW/g; SAR(10 g) = 0.452 mW/g
Maximum value of SAR (measured) = 0.636 mW/g

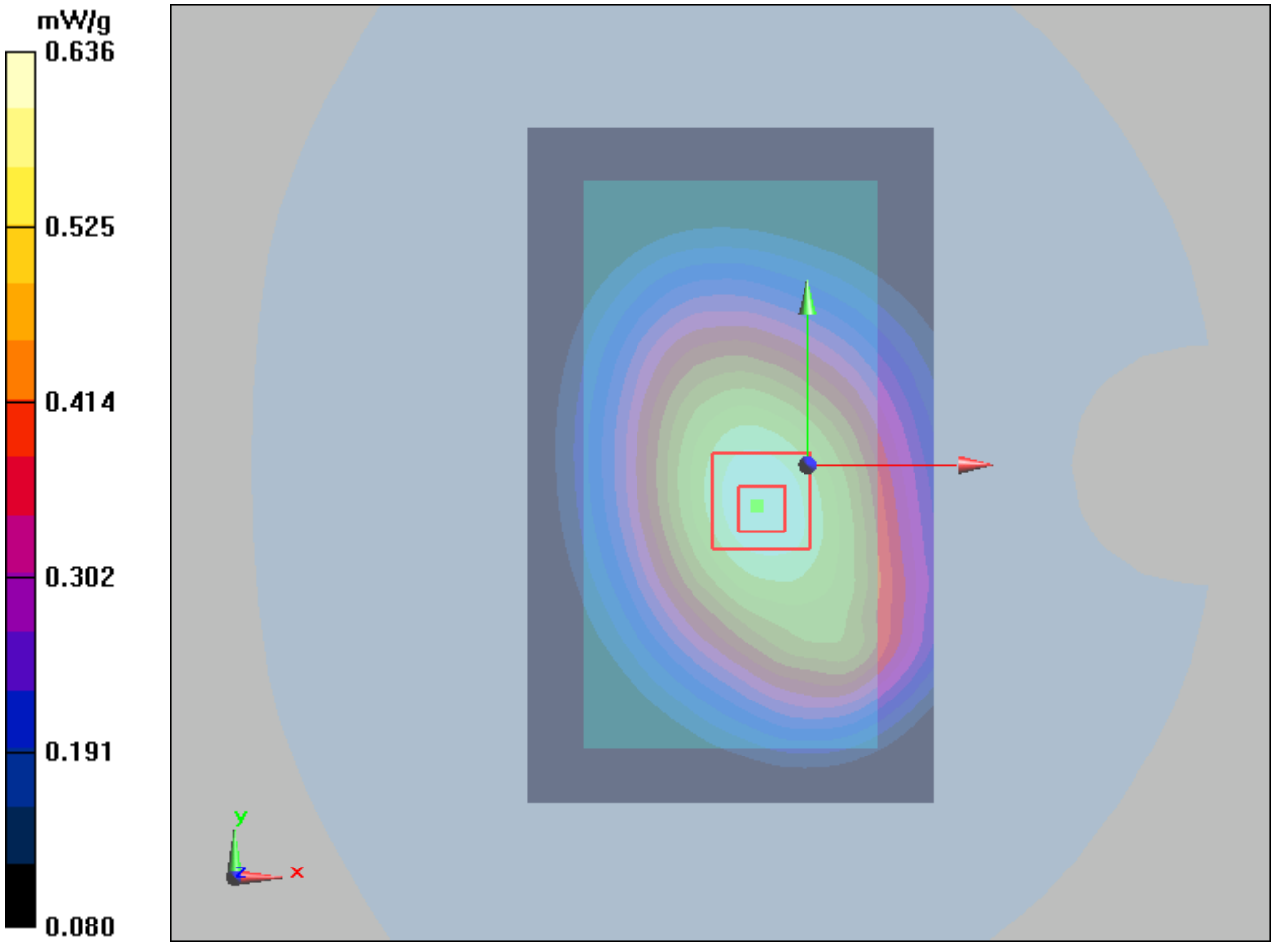


Figure 56 Body, CDMA BC10 Back Side Channel 580

CDMA BC10 Front Side Middle (Battery 1, Full Power)

Date/Time: 2/21/2013 9:59:02 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.442 mW/g

Front side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.2 V/m; Power Drift = -0.029 dB
Peak SAR (extrapolated) = 0.531 W/kg
SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.319 mW/g
Maximum value of SAR (measured) = 0.444 mW/g

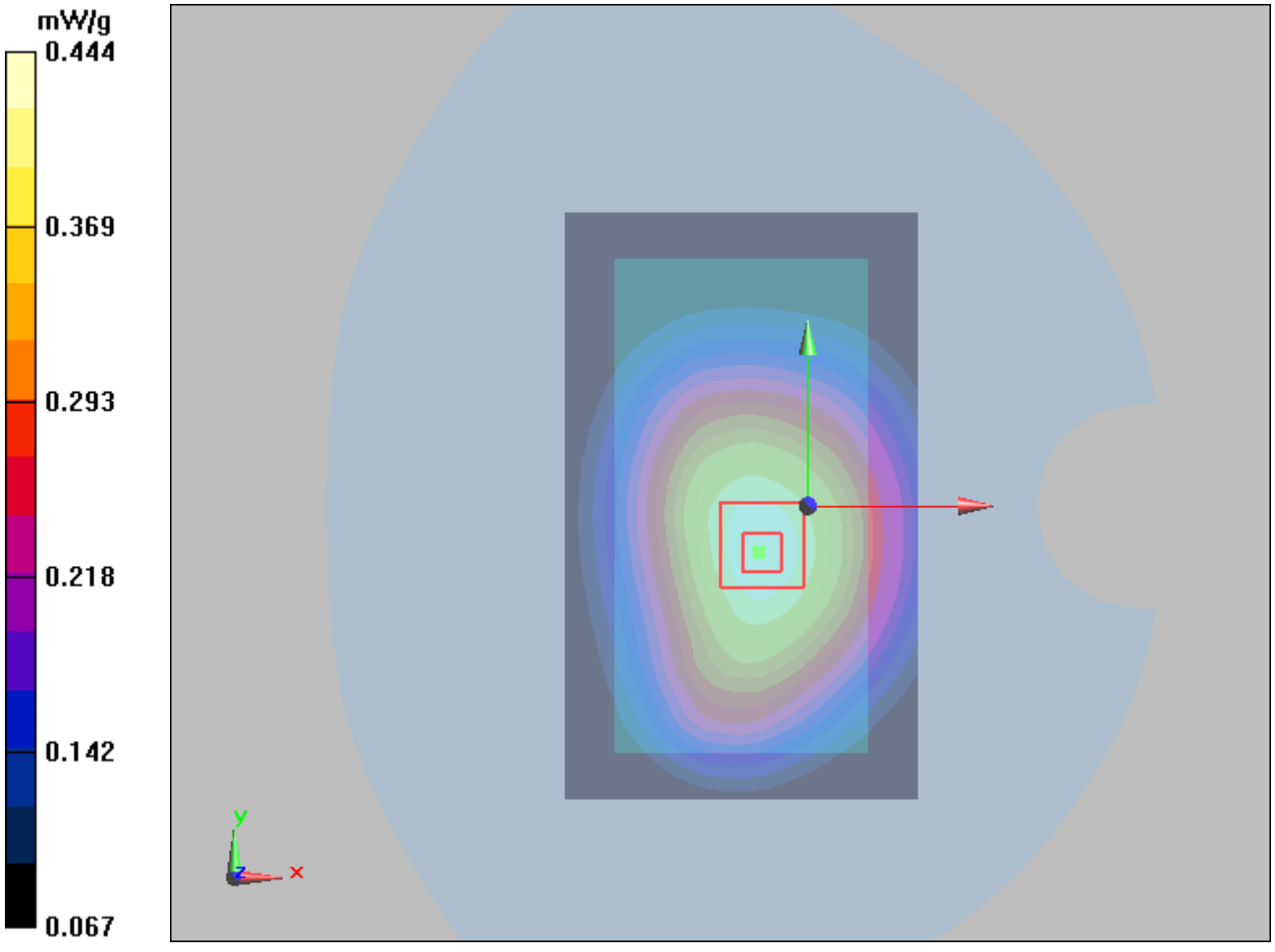


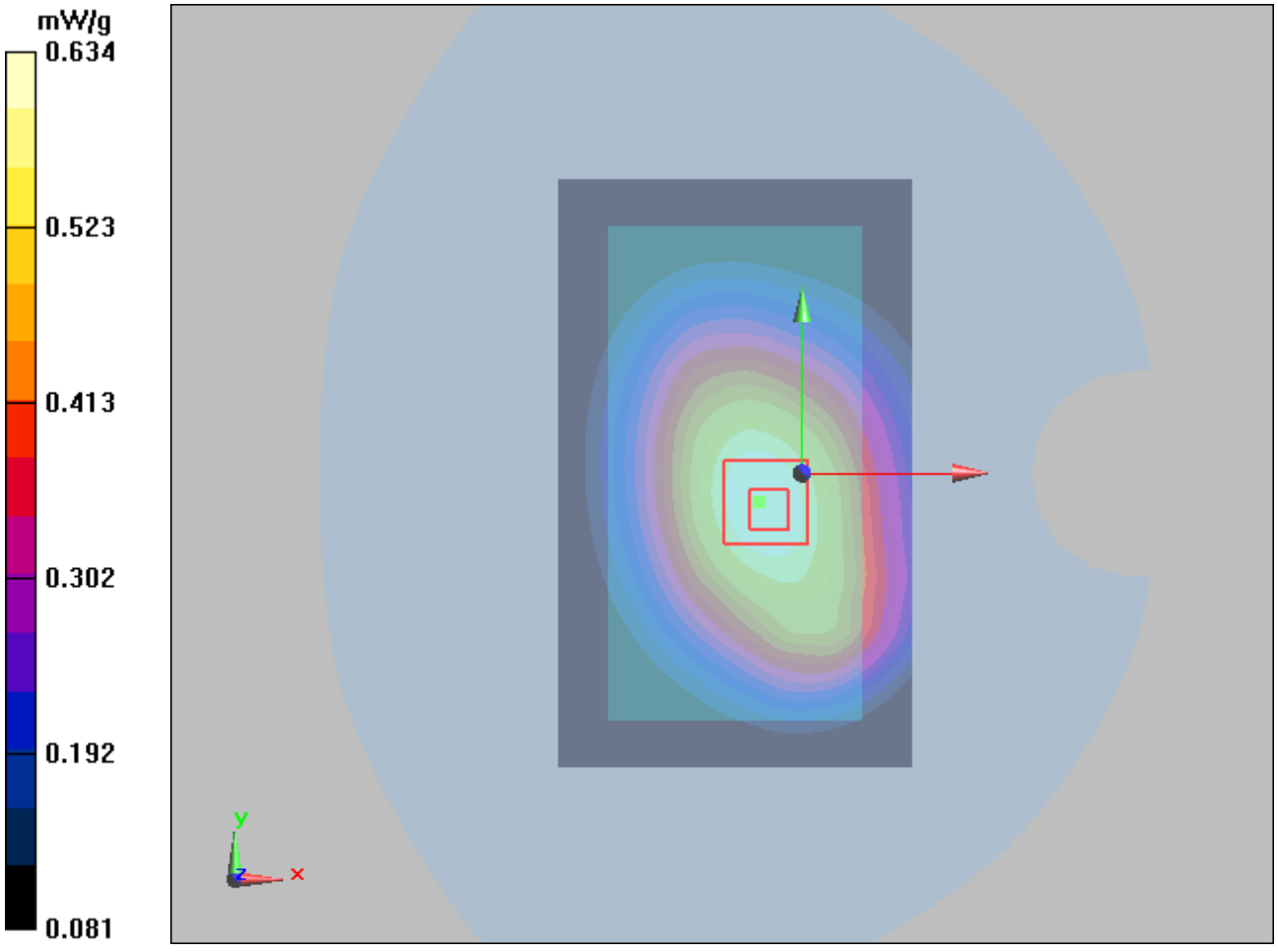
Figure 57 Body, CDMA BC10 Front Side Channel 580

CDMA BC10 Back Side Middle (Battery 2, Full Power)

Date/Time: 2/21/2013 9:42:08 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.643 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.3 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 0.777 W/kg
SAR(1 g) = 0.611 mW/g; SAR(10 g) = 0.457 mW/g
Maximum value of SAR (measured) = 0.634 mW/g



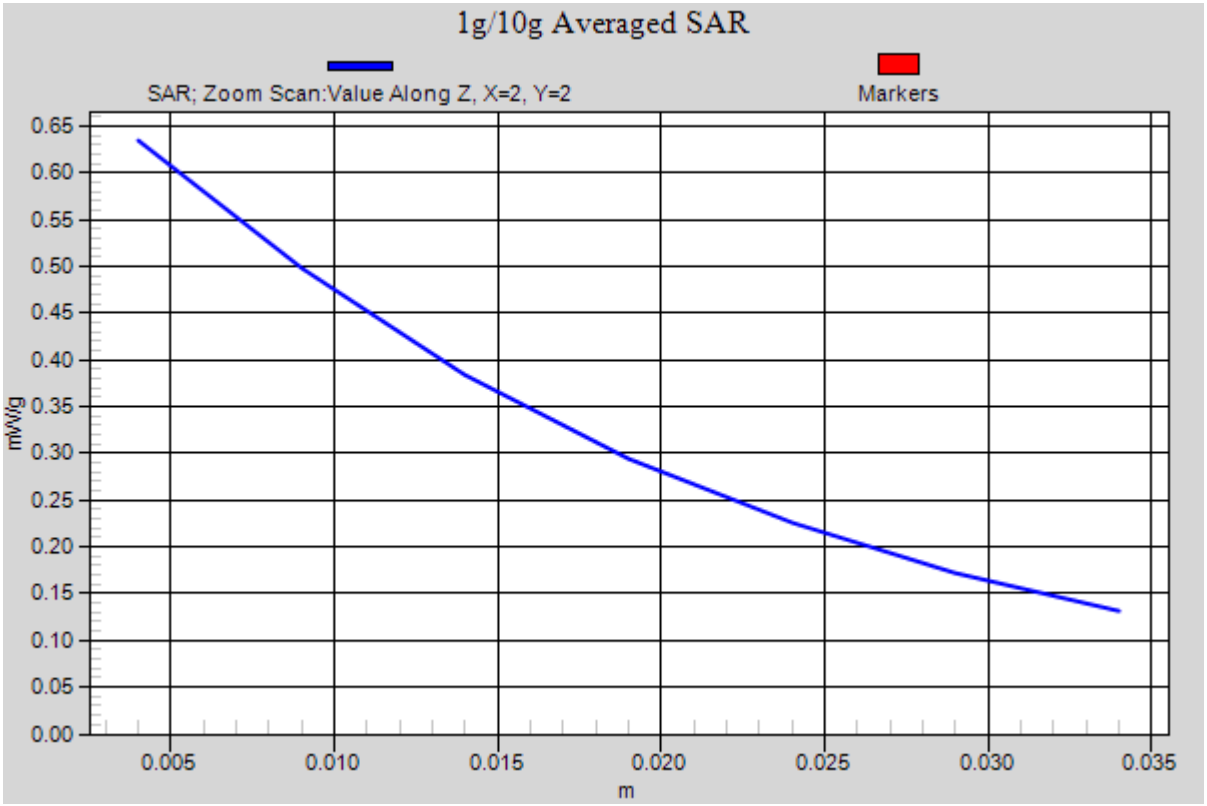


Figure 58 Body, CDMA BC10 Back Side Channel 580

CDMA BC10 Left Cheek Middle (Battery 1, Power=21dBm)

Date/Time: 2/5/2013 11:38:43 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.264 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.41 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 0.338 W/kg
SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.264 mW/g

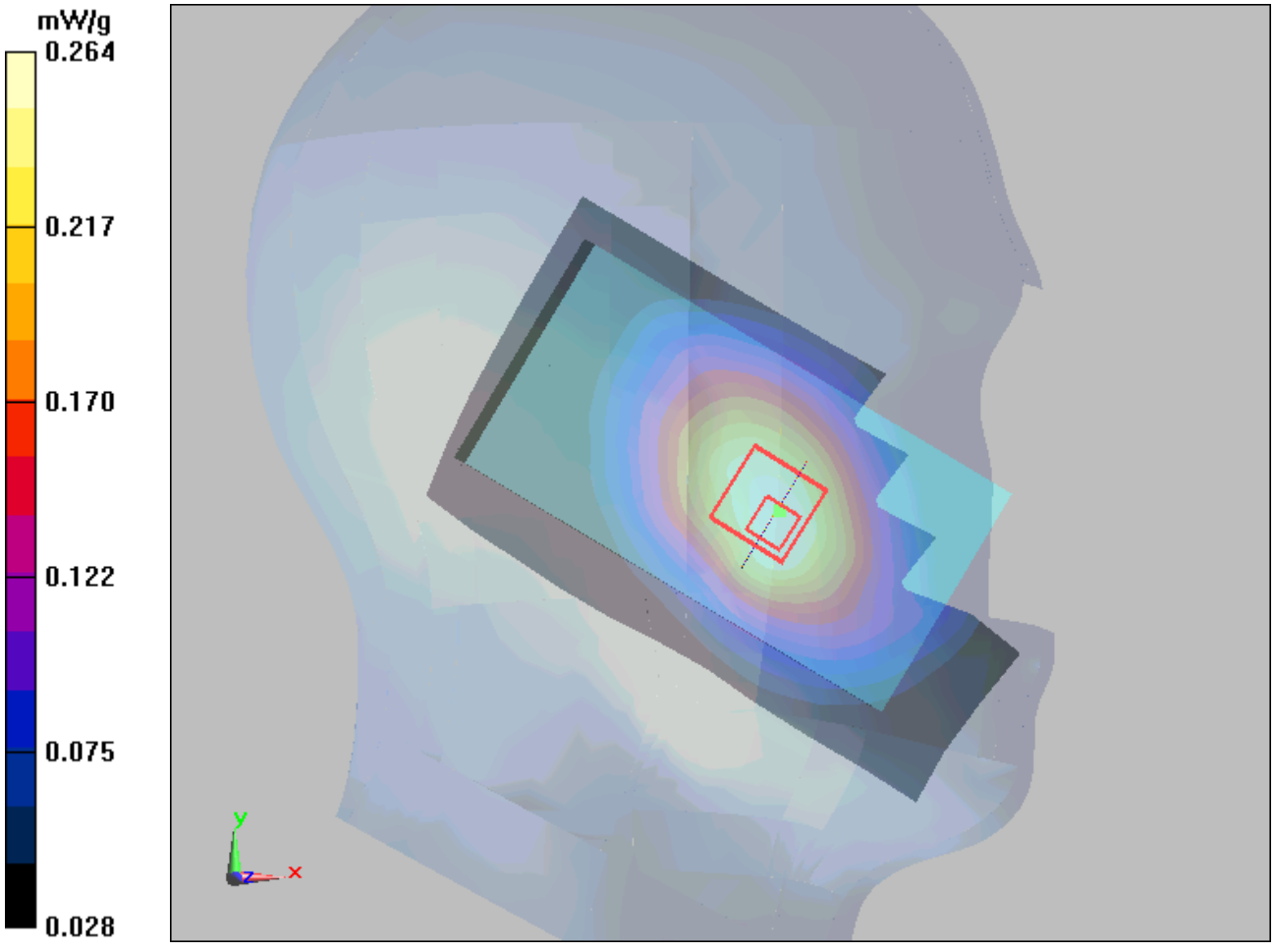


Figure 59 CDMA BC10 Left Hand Touch Cheek Channel 580

CDMA BC10 Left Tilt Middle (Battery 1, Power=21dBm)

Date/Time: 2/5/2013 8:49:15 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.150 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.13 V/m; Power Drift = 0.166 dB
Peak SAR (extrapolated) = 0.172 W/kg
SAR(1 g) = 0.139 mW/g; SAR(10 g) = 0.106 mW/g
Maximum value of SAR (measured) = 0.146 mW/g

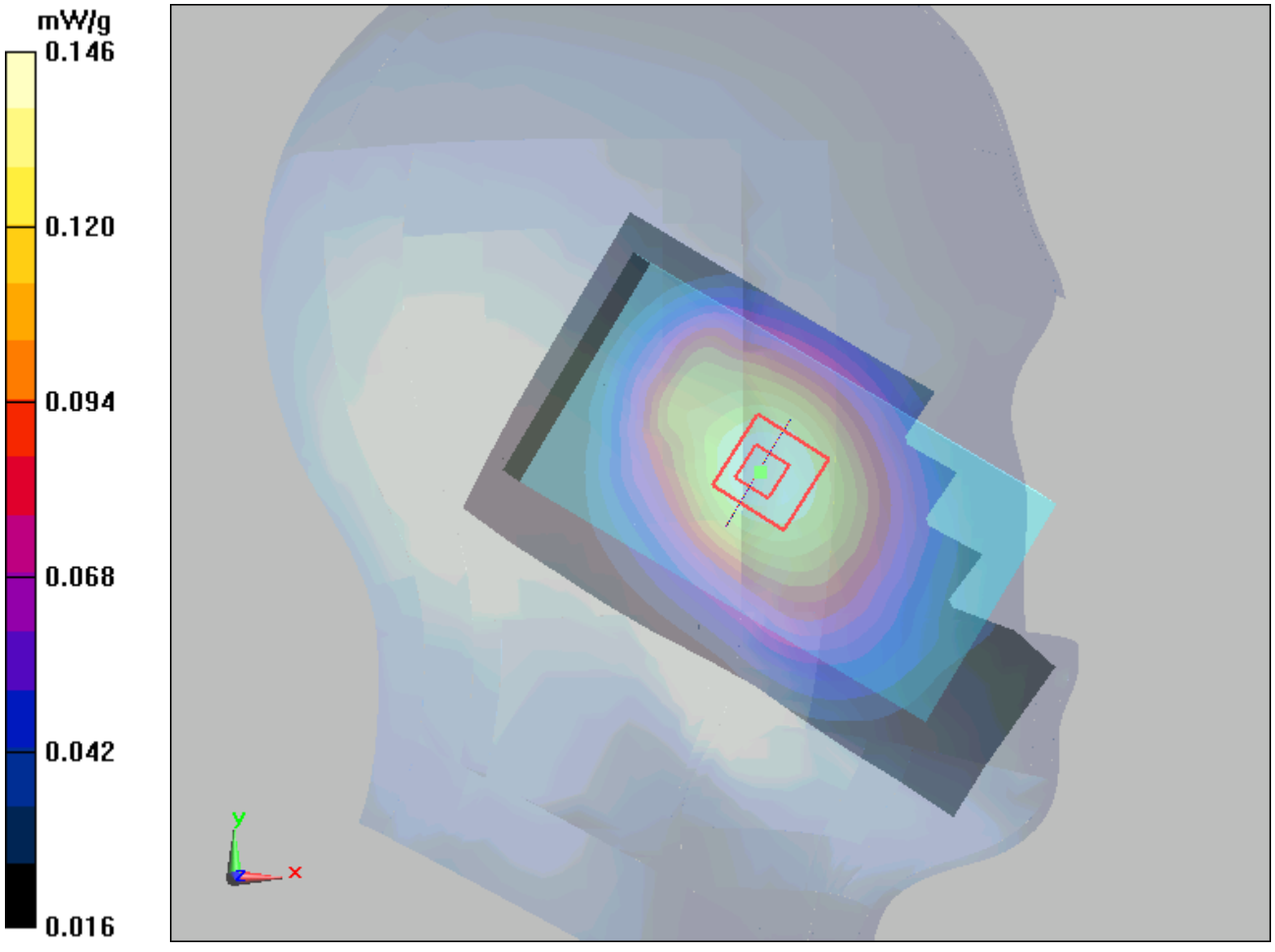


Figure 60 CDMA BC10 Left Hand Tilt 15° Channel 580

CDMA BC10 Right Cheek Middle (Battery 1, Power=21dBm)

Date/Time: 2/5/2013 9:50:01 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.190 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.14 V/m; Power Drift = 0.000216 dB
Peak SAR (extrapolated) = 0.219 W/kg
SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.135 mW/g
Maximum value of SAR (measured) = 0.186 mW/g

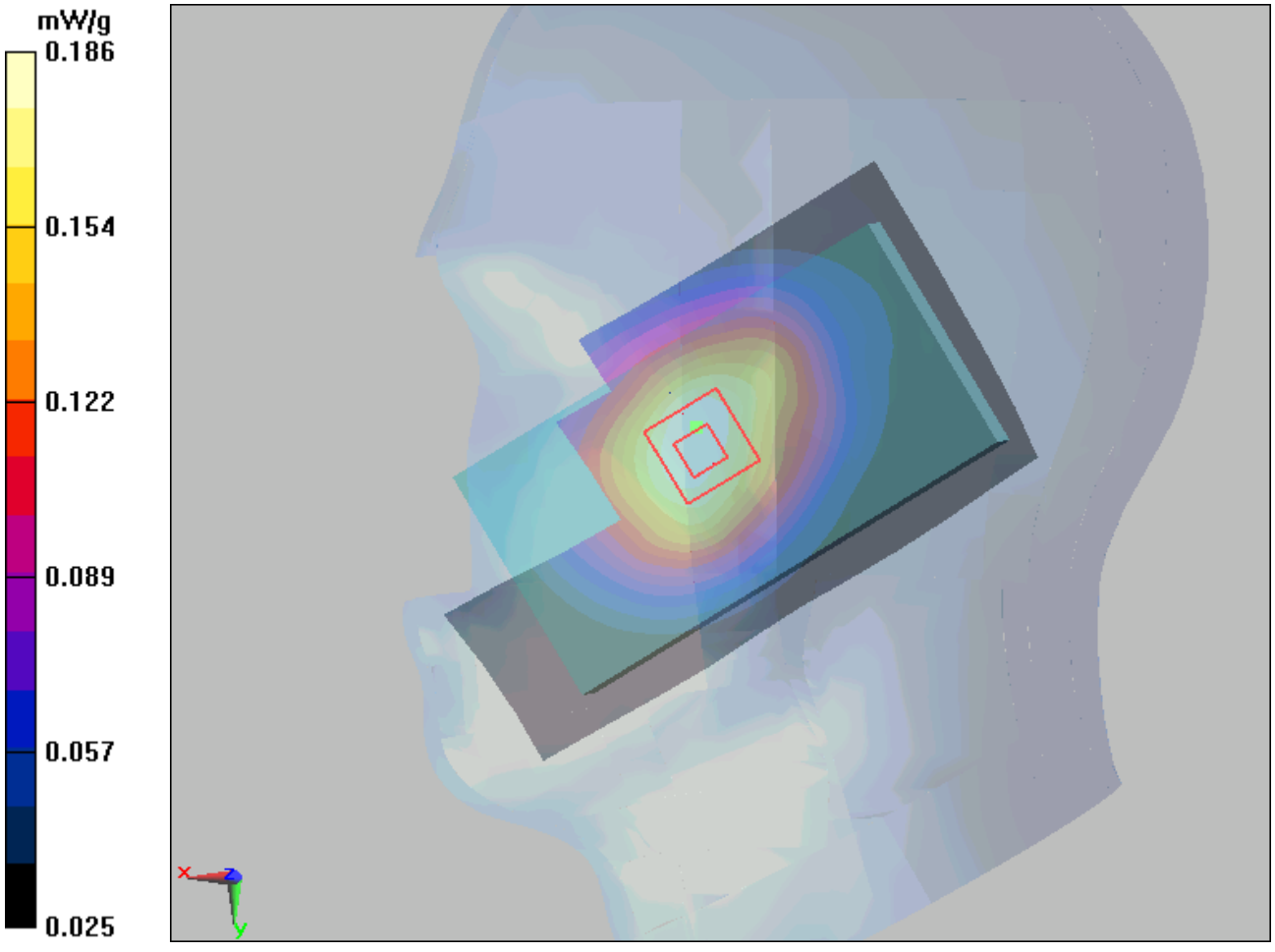


Figure 61 CDMA BC10 Right Hand Touch Cheek Channel 580

CDMA BC10 Right Tilt Middle (Battery 1, Power=21dBm)

Date/Time: 2/5/2013 10:07:26 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.159 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.58 V/m; Power Drift = -0.108 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.115 mW/g
Maximum value of SAR (measured) = 0.160 mW/g

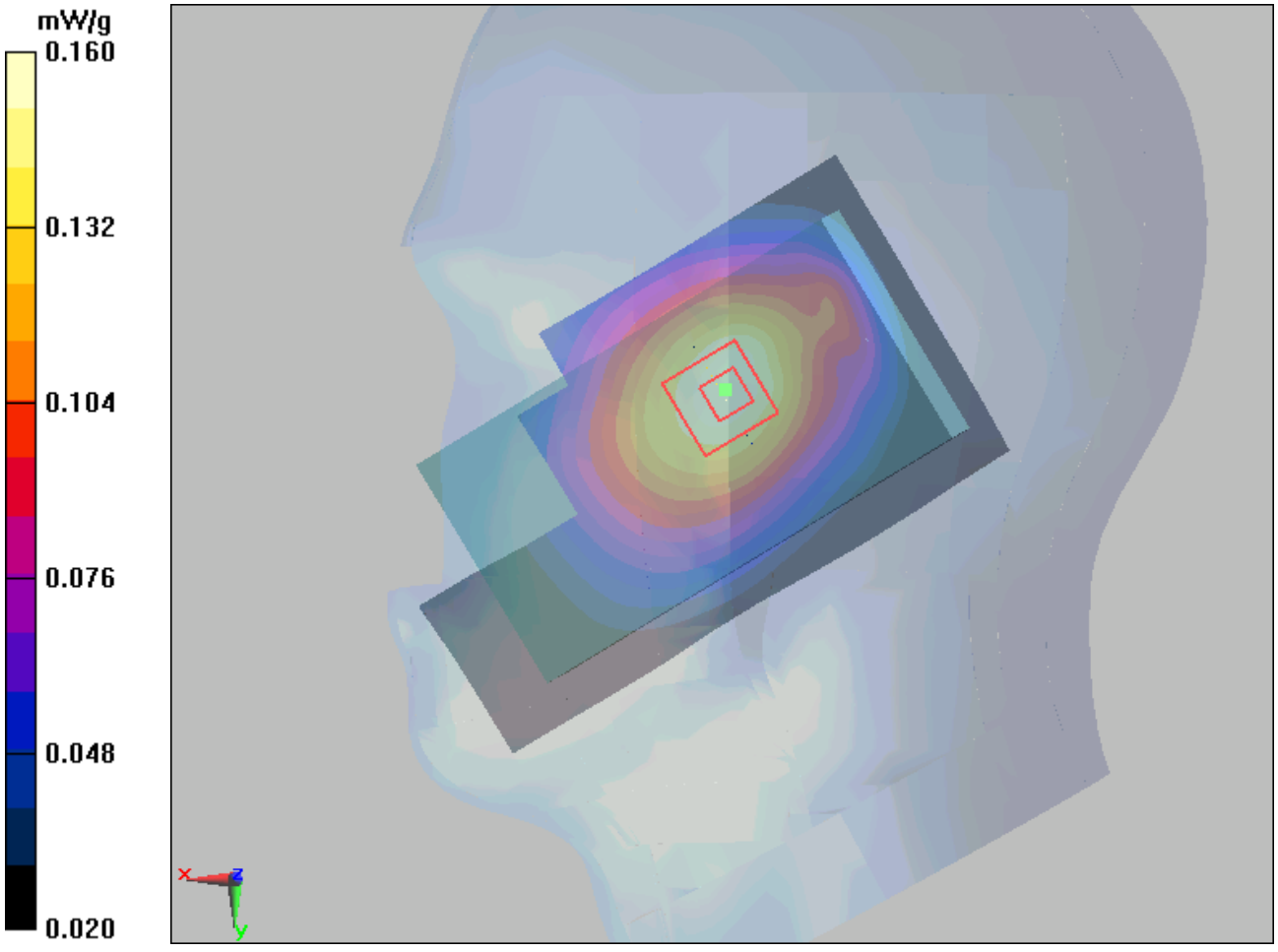


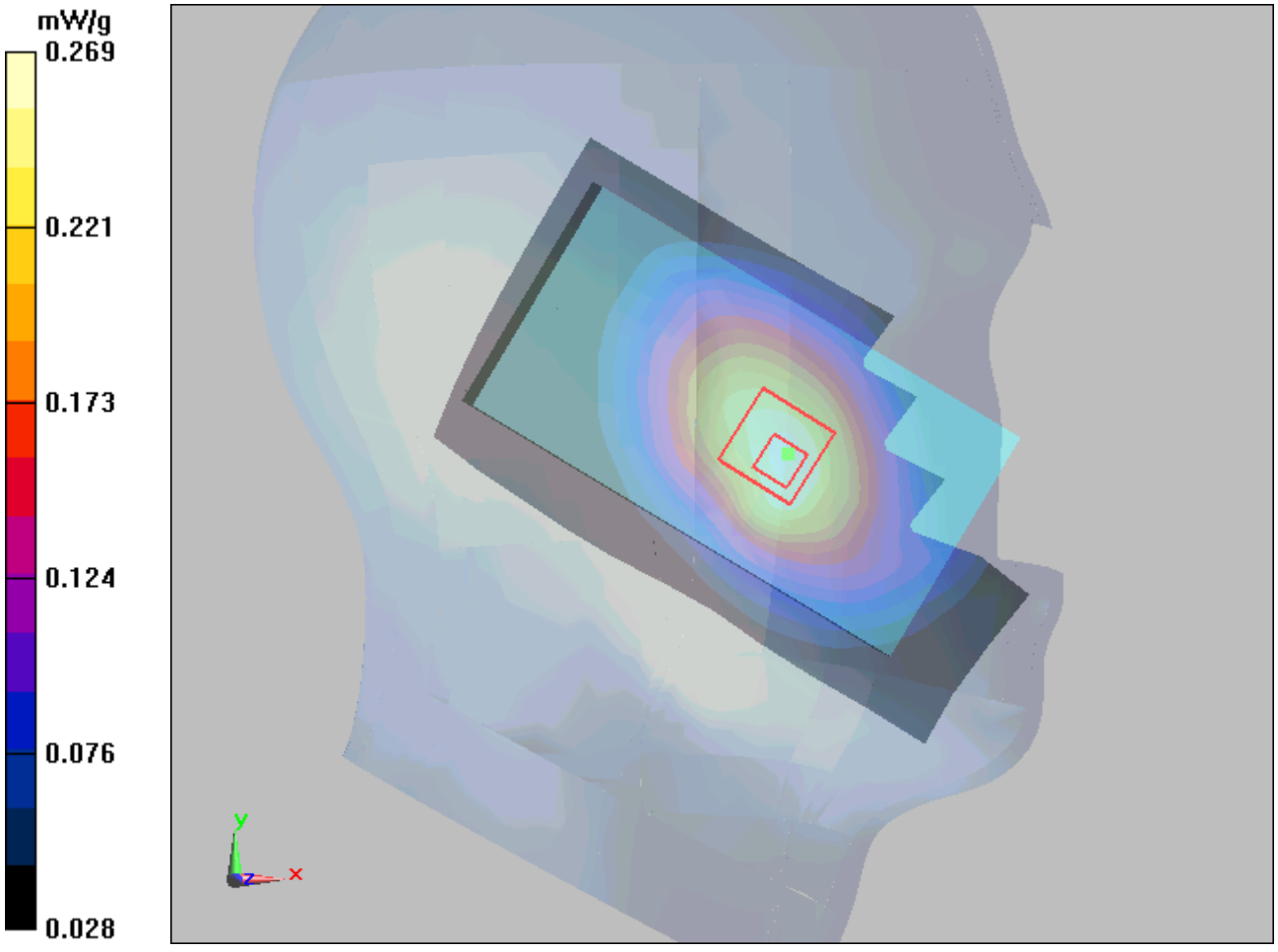
Figure 62 CDMA BC10 Right Hand Tilt 15° Channel 580

CDMA BC10 Left Cheek Middle (Battery 2, Power=21dBm)

Date/Time: 2/5/2013 11:56:43 PM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.902 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.261 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.35 V/m; Power Drift = 0.159 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.254 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.269 mW/g



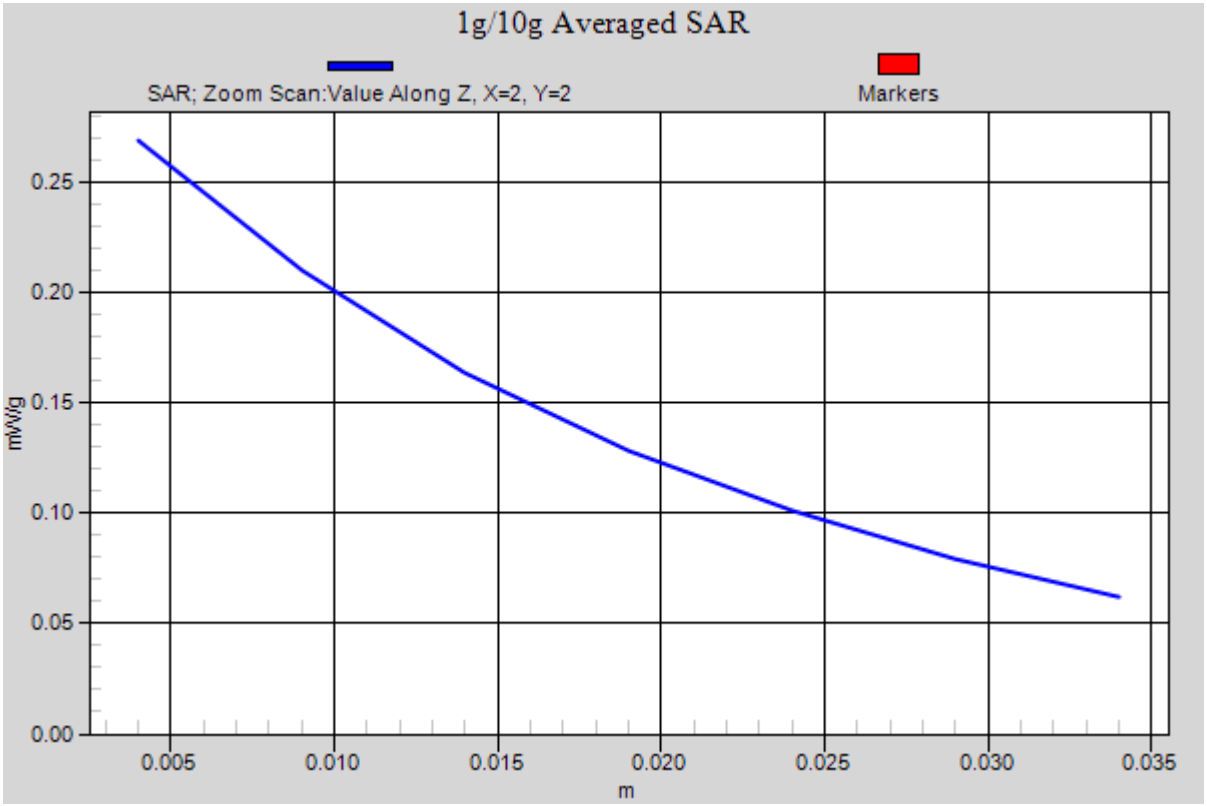


Figure 63 CDMA BC10 Left Hand Touch Cheek Channel 580

CDMA BC10 Back Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/21/2013 10:37:42 AM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.302 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.4 V/m; Power Drift = -0.161 dB
Peak SAR (extrapolated) = 0.363 W/kg
SAR(1 g) = 0.282 mW/g; SAR(10 g) = 0.210 mW/g
Maximum value of SAR (measured) = 0.298 mW/g

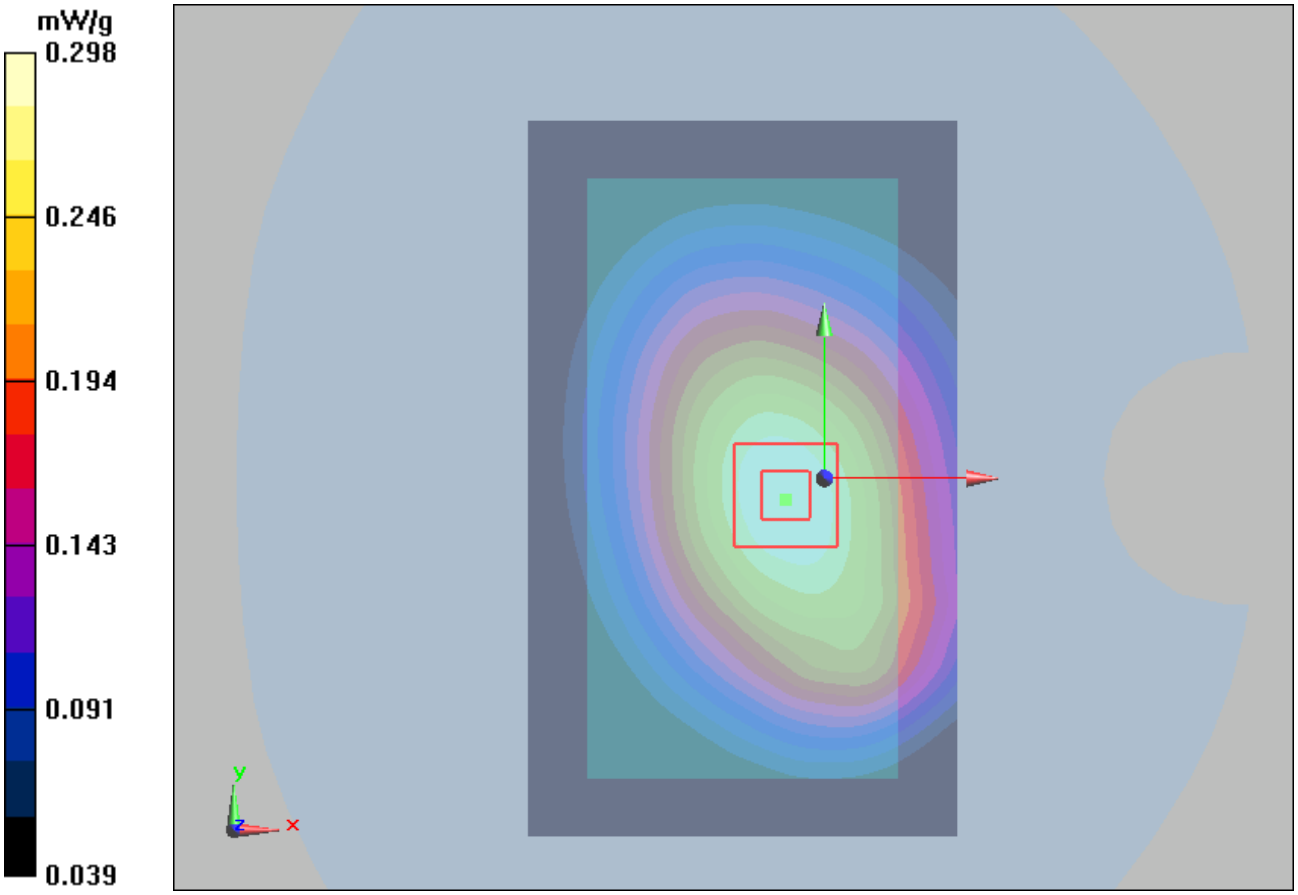


Figure 64 Body, CDMA BC10 Back Side Channel 580

CDMA BC10 Front Side Middle (Battery 1, Power=21dBm)

Date/Time: 2/21/2013 10:56:13 AM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.226 mW/g

Front side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.1 V/m; Power Drift = 0.00263 dB
Peak SAR (extrapolated) = 0.268 W/kg
SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.160 mW/g
Maximum value of SAR (measured) = 0.223 mW/g

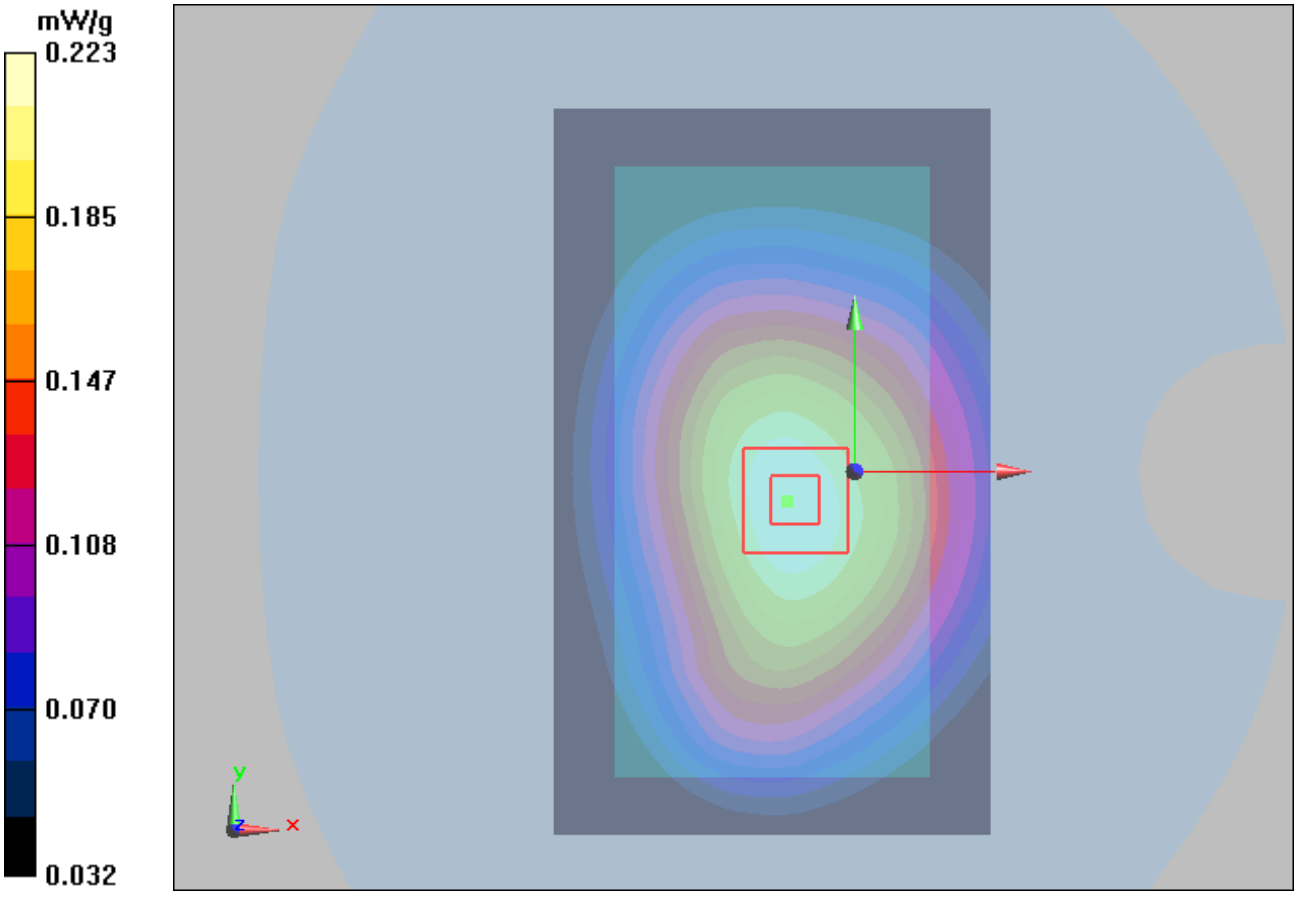


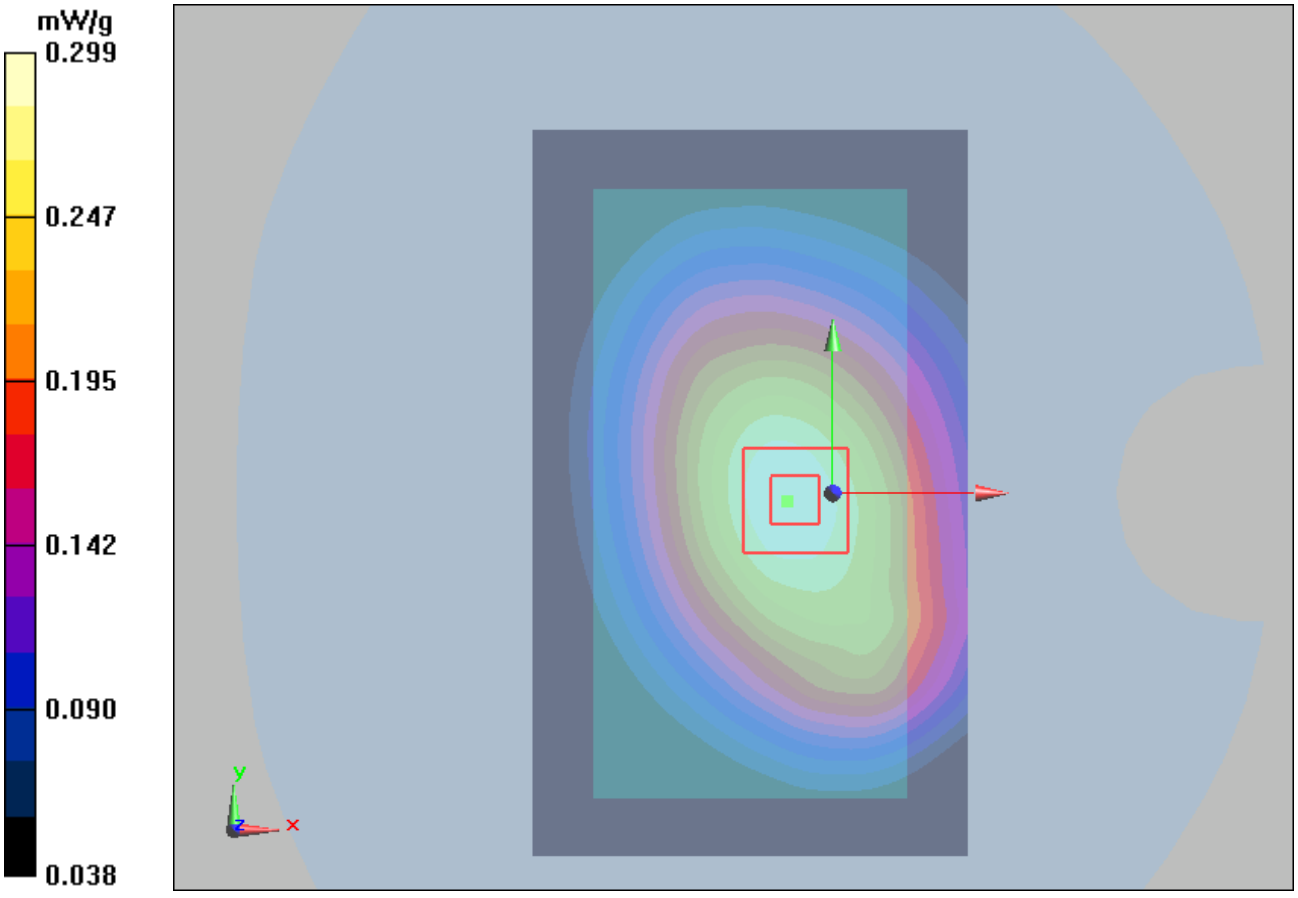
Figure 65 Body, CDMA BC10 Front Side Channel 580

CDMA BC10 Back Side Middle (Battery 2, Power=21dBm)

Date/Time: 2/21/2013 11:55:53 AM
Communication System: CDMA ; Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 820.5 MHz; σ = 0.975 mho/m; ε_r = 55.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(5.81, 5.81, 5.81); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.299 mW/g

Back side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.5 V/m; Power Drift = -0.123 dB
Peak SAR (extrapolated) = 0.364 W/kg
SAR(1 g) = 0.285 mW/g; SAR(10 g) = 0.212 mW/g
Maximum value of SAR (measured) = 0.299 mW/g



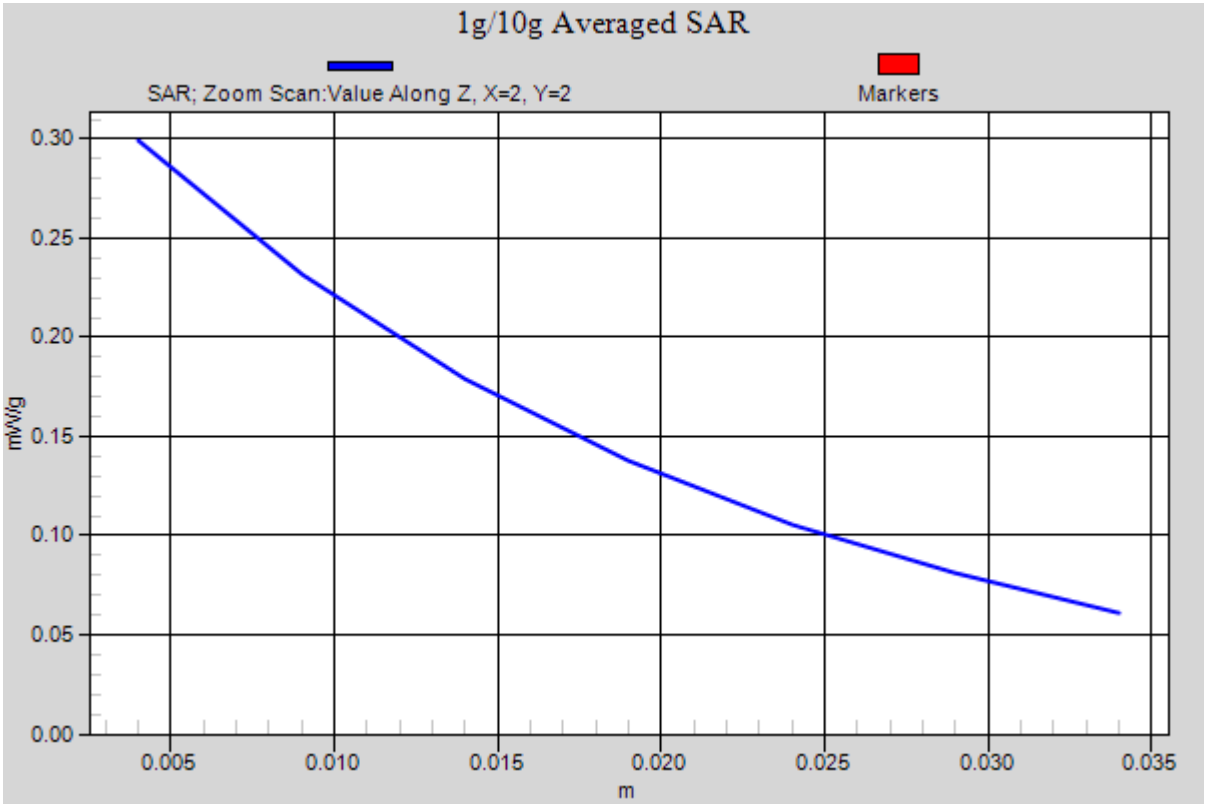


Figure 66 Body, CDMA BC10 Back Side Channel 580

LTE Band 25 with 1RB Left Cheek High (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 12:36:02 PM
Communication System: LTE; Frequency: 1910 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1910 MHz; σ = 1.42 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.466 mW/g

Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.6 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 0.670 W/kg
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.276 mW/g
Maximum value of SAR (measured) = 0.452 mW/g

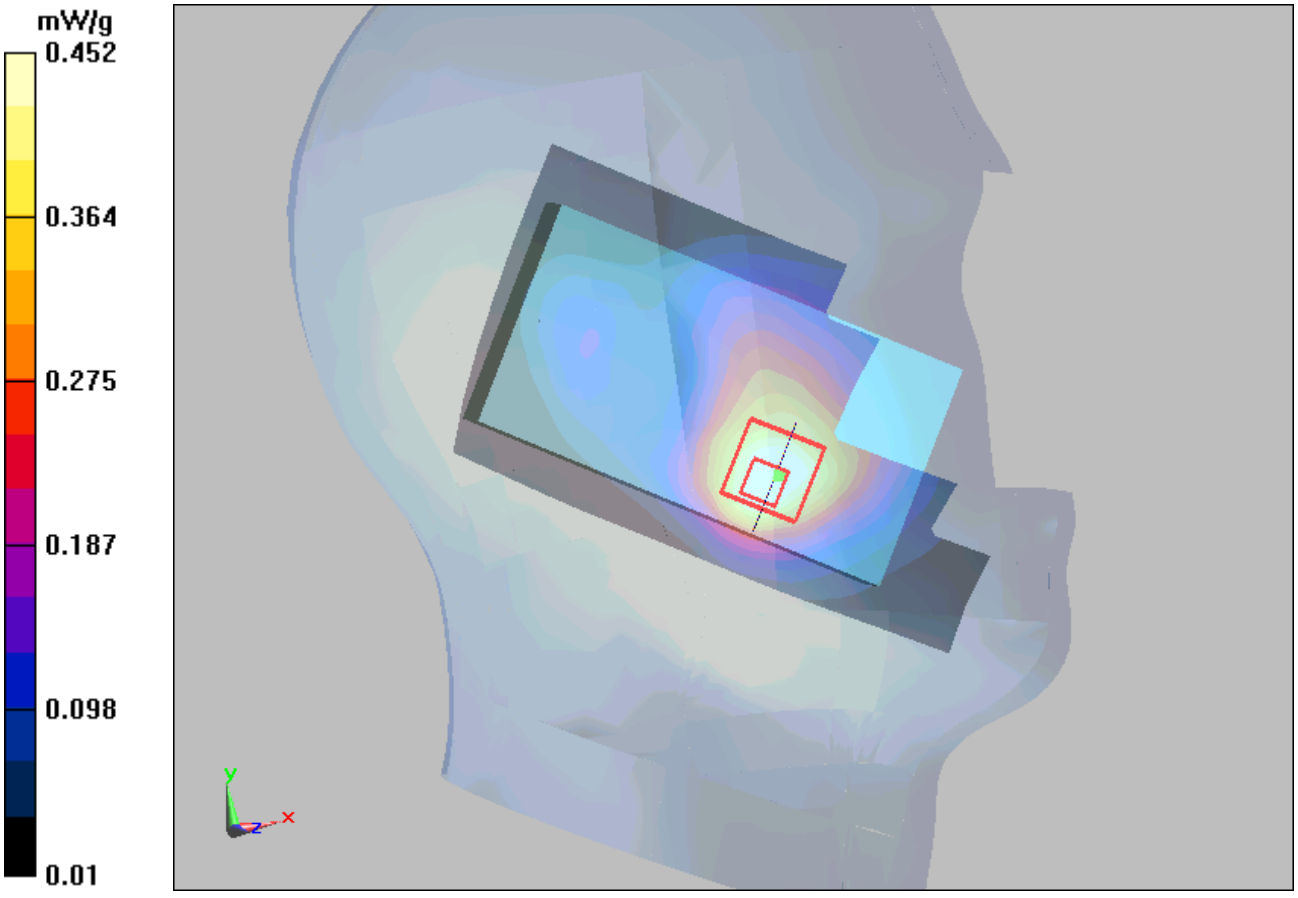


Figure 67 LTE Band 25 with 1RB Left Hand Touch Cheek Channel 26640

LTE Band 25 with 1RB Left Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 11:16:24 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.741 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.2 V/m; Power Drift = -0.167 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.426 mW/g
Maximum value of SAR (measured) = 0.709 mW/g

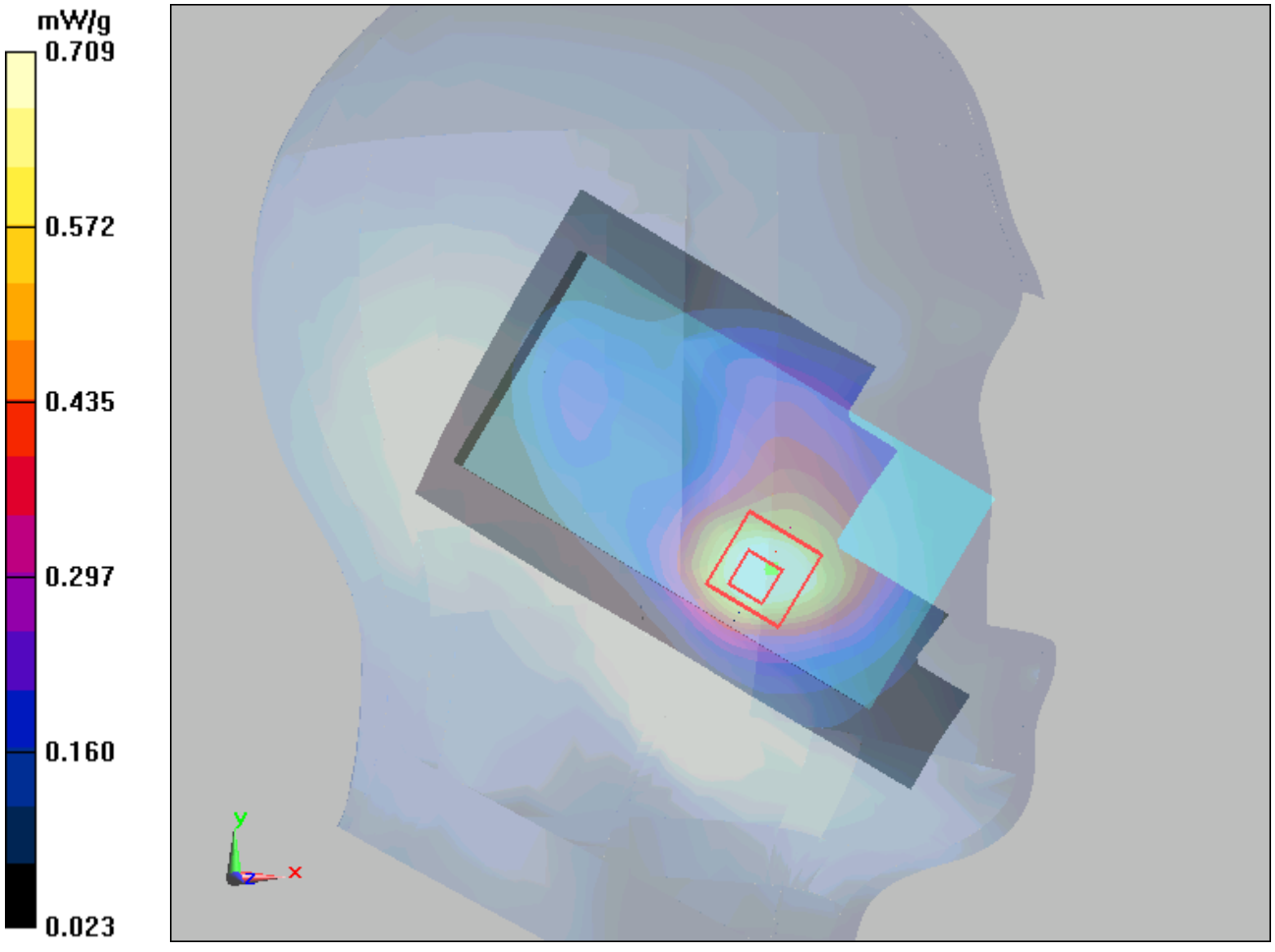


Figure 68 LTE Band 25 with 1RB Left Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Left Cheek Low (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 12:53:57 PM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.37 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.626 mW/g

Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.67 V/m; Power Drift = 0.00182 dB
Peak SAR (extrapolated) = 0.883 W/kg
SAR(1 g) = 0.574 mW/g; SAR(10 g) = 0.364 mW/g
Maximum value of SAR (measured) = 0.610 mW/g

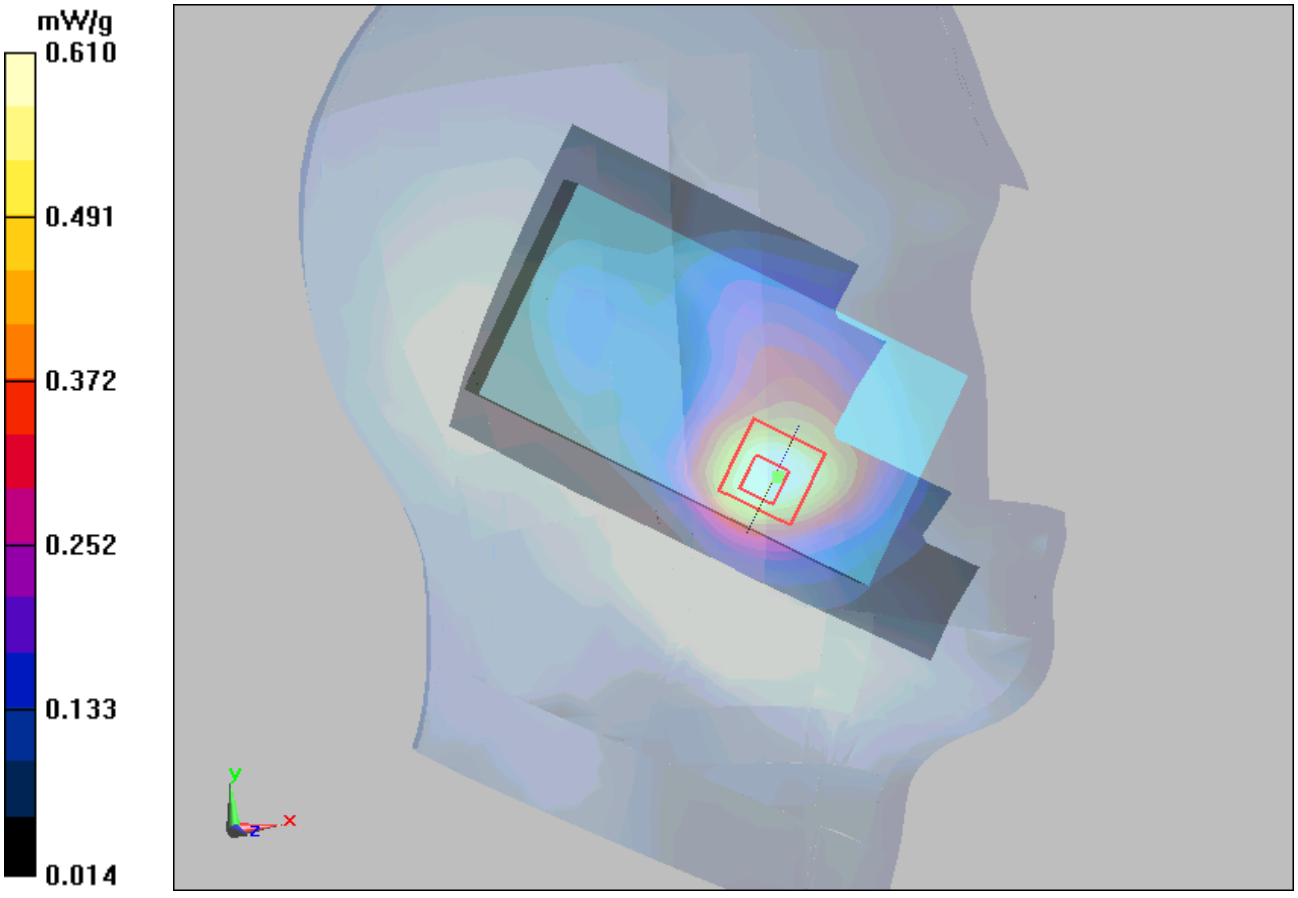


Figure 69 LTE Band 25 with 1RB Left Hand Touch Cheek Channel 26090

LTE Band 25 with 1RB Left Tilt Low (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:19:43 PM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.37 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.433 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.6 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.633 W/kg
SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.424 mW/g

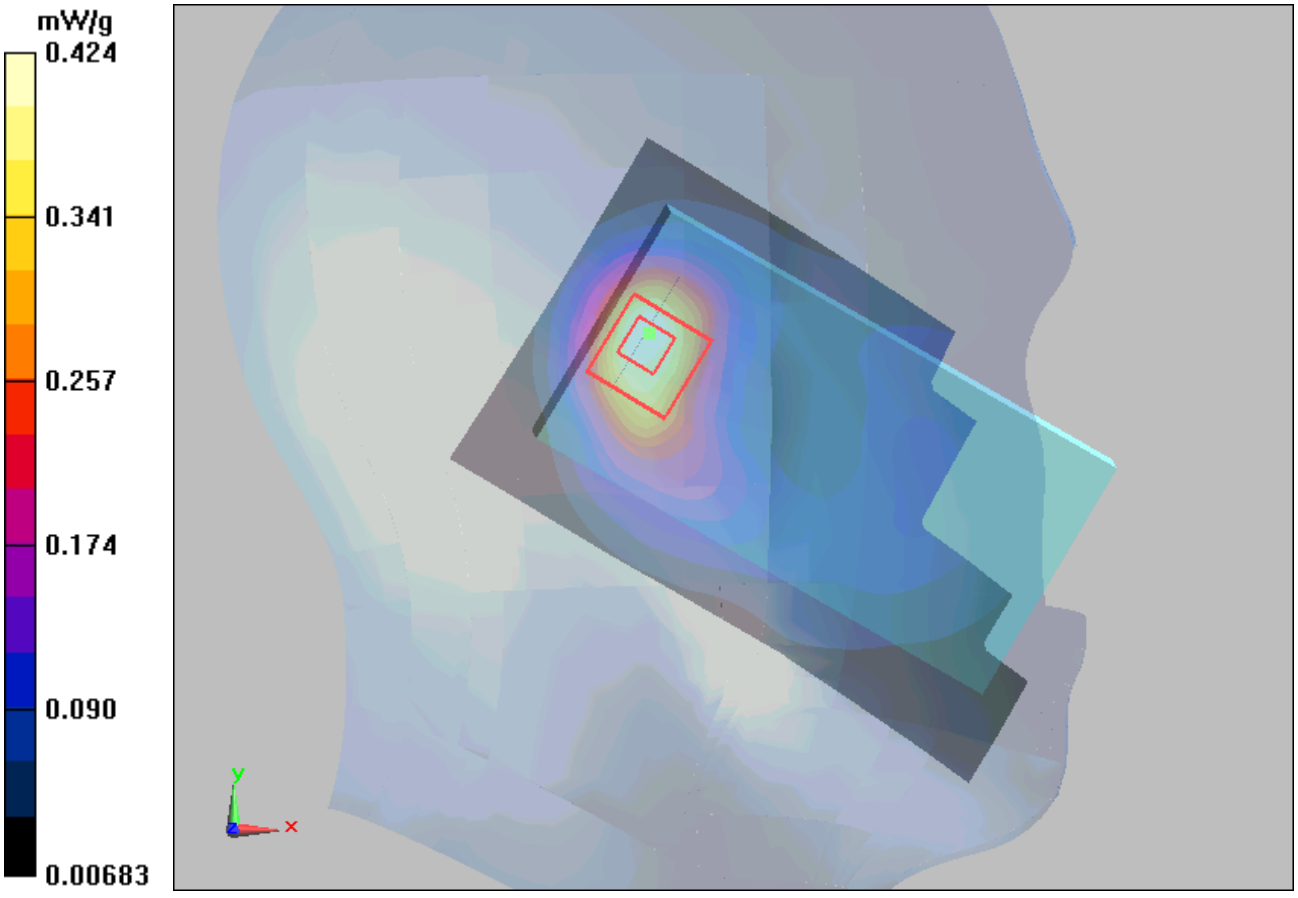


Figure 70 LTE Band 25 with 1RB Left Hand Tilt 15° Channel 26090

LTE Band 25 with 1RB Right Cheek High (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:36:22 PM
Communication System: LTE; Frequency: 1910 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1910 MHz; σ = 1.42 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK High/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.777 mW/g

CheeK High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = -0.050 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.738 mW/g; SAR(10 g) = 0.492 mW/g
Maximum value of SAR (measured) = 0.790 mW/g

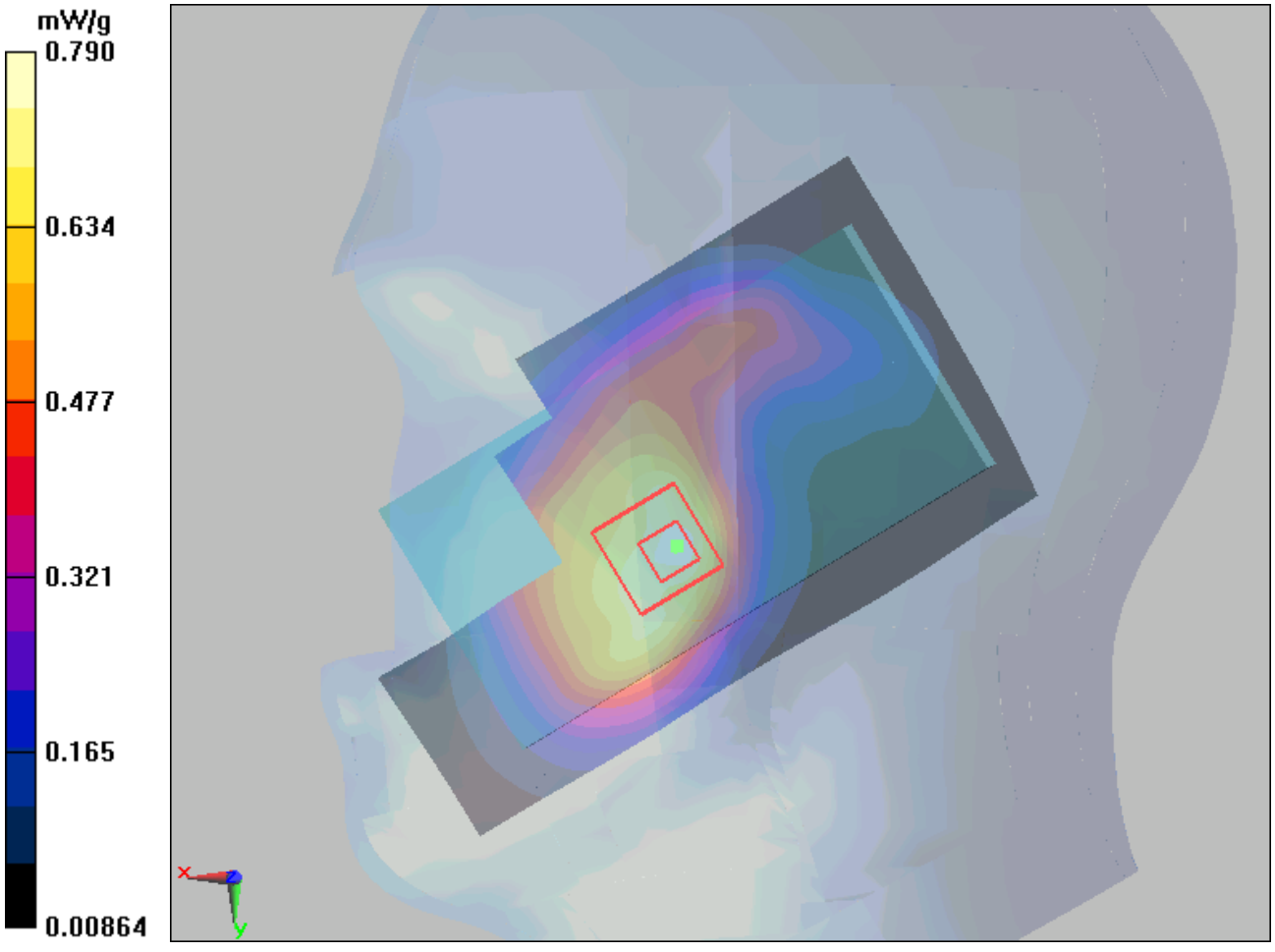


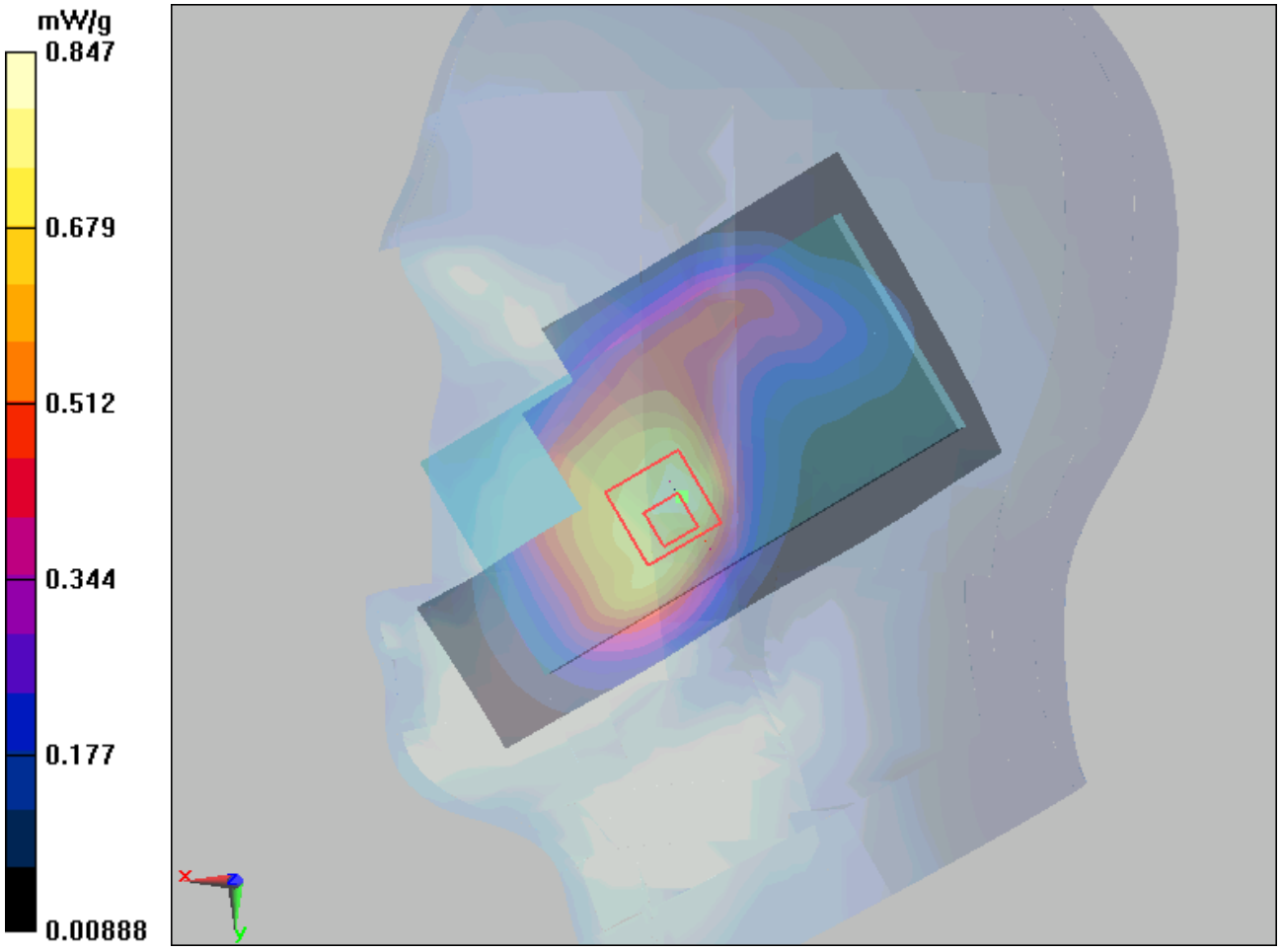
Figure 71 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26640

LTE Band 25 with 1RB Right Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:53:51 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.794 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.812 mW/g; SAR(10 g) = 0.528 mW/g
Maximum value of SAR (measured) = 0.847 mW/g



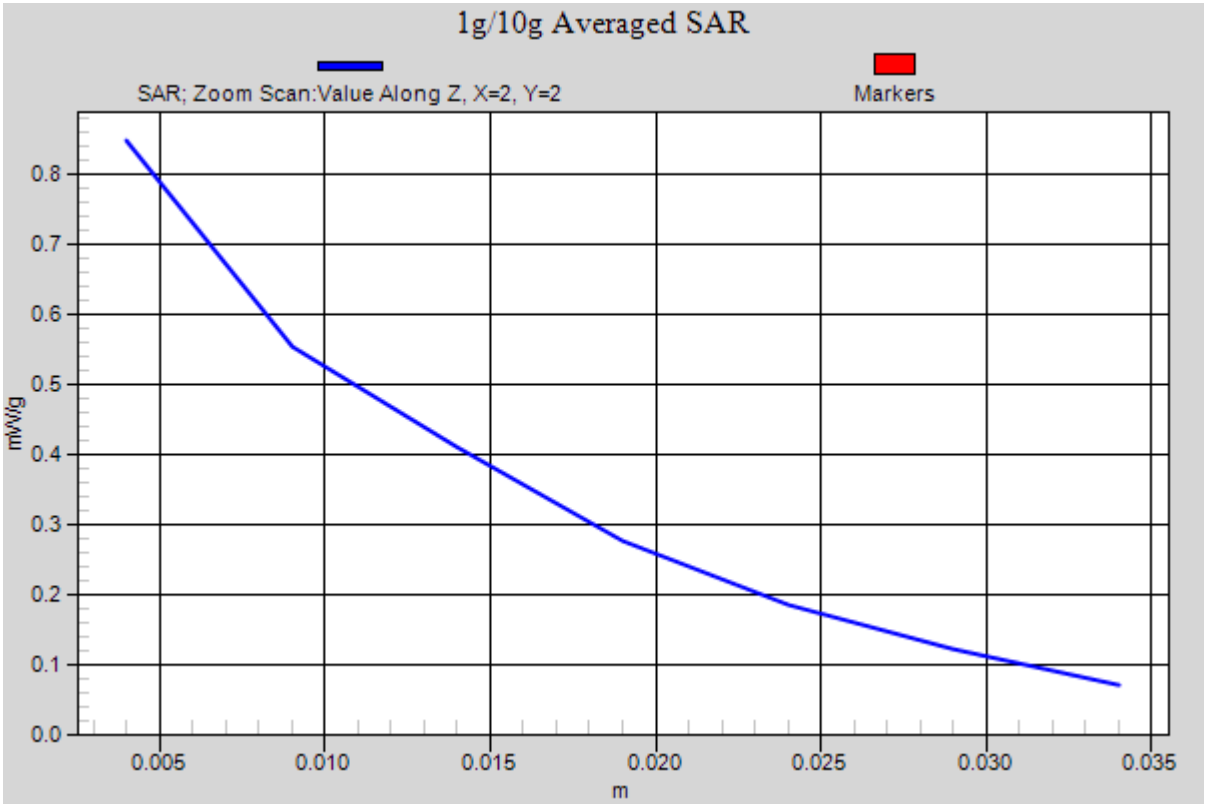


Figure 72 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Right Cheek Low (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 8:15:00 AM

Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1855 MHz; σ = 1.37 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.763 mW/g

CheeK Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.495 mW/g

Maximum value of SAR (measured) = 0.791 mW/g

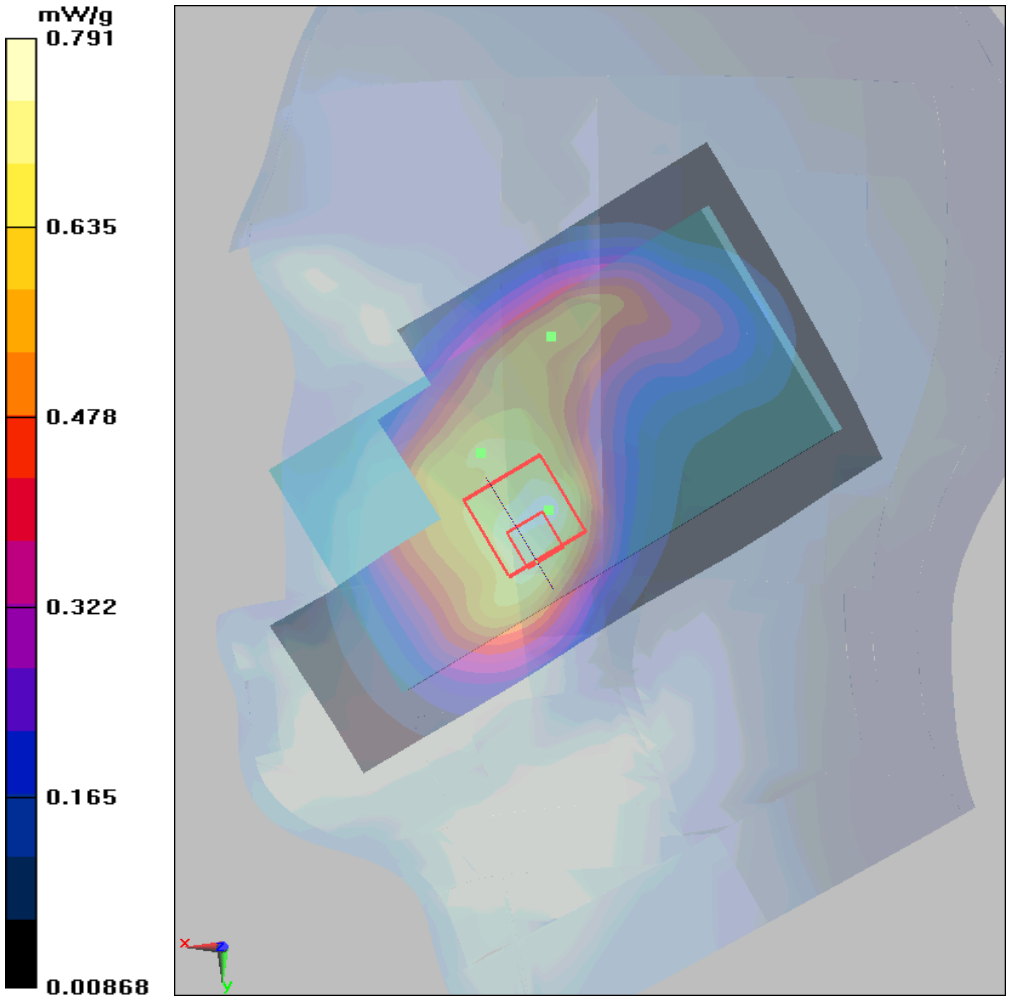


Figure 73 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26090

LTE Band 25 with 1RB Right Tilt Low (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 8:31:27 AM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.37 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.491 mW/g

Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.5 V/m; Power Drift = 0.054 dB
Peak SAR (extrapolated) = 0.709 W/kg
SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.272 mW/g
Maximum value of SAR (measured) = 0.486 mW/g

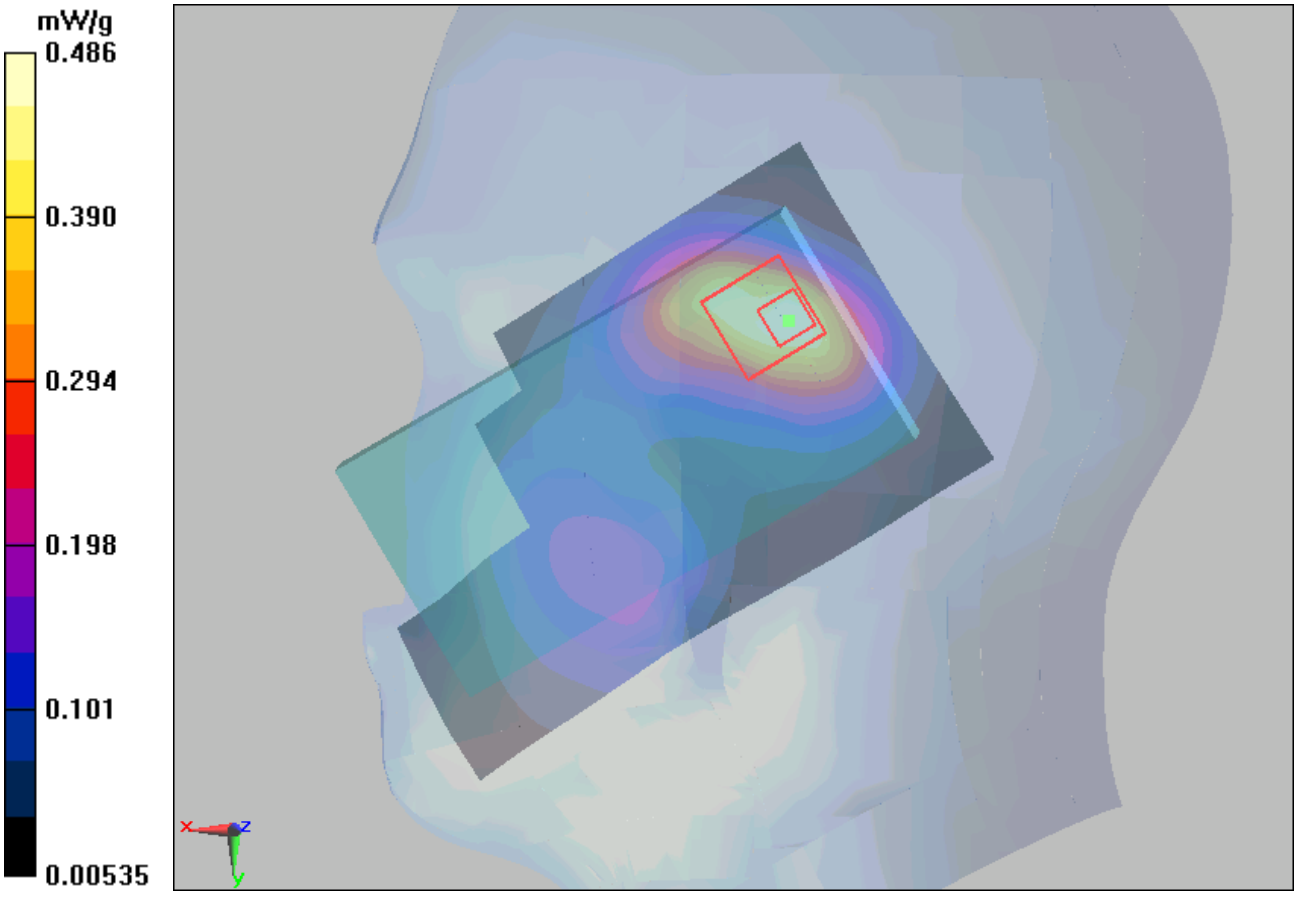


Figure 74 LTE Band 25 with 1RB Right Hand Tilt 15° Channel 26090

LTE Band 25 with 1RB Right Cheek Middle (10MHz, Battery 2, Full Power)

Date/Time: 2/24/2013 8:48:15 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.800 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.750 mW/g; SAR(10 g) = 0.497 mW/g
Maximum value of SAR (measured) = 0.800 mW/g

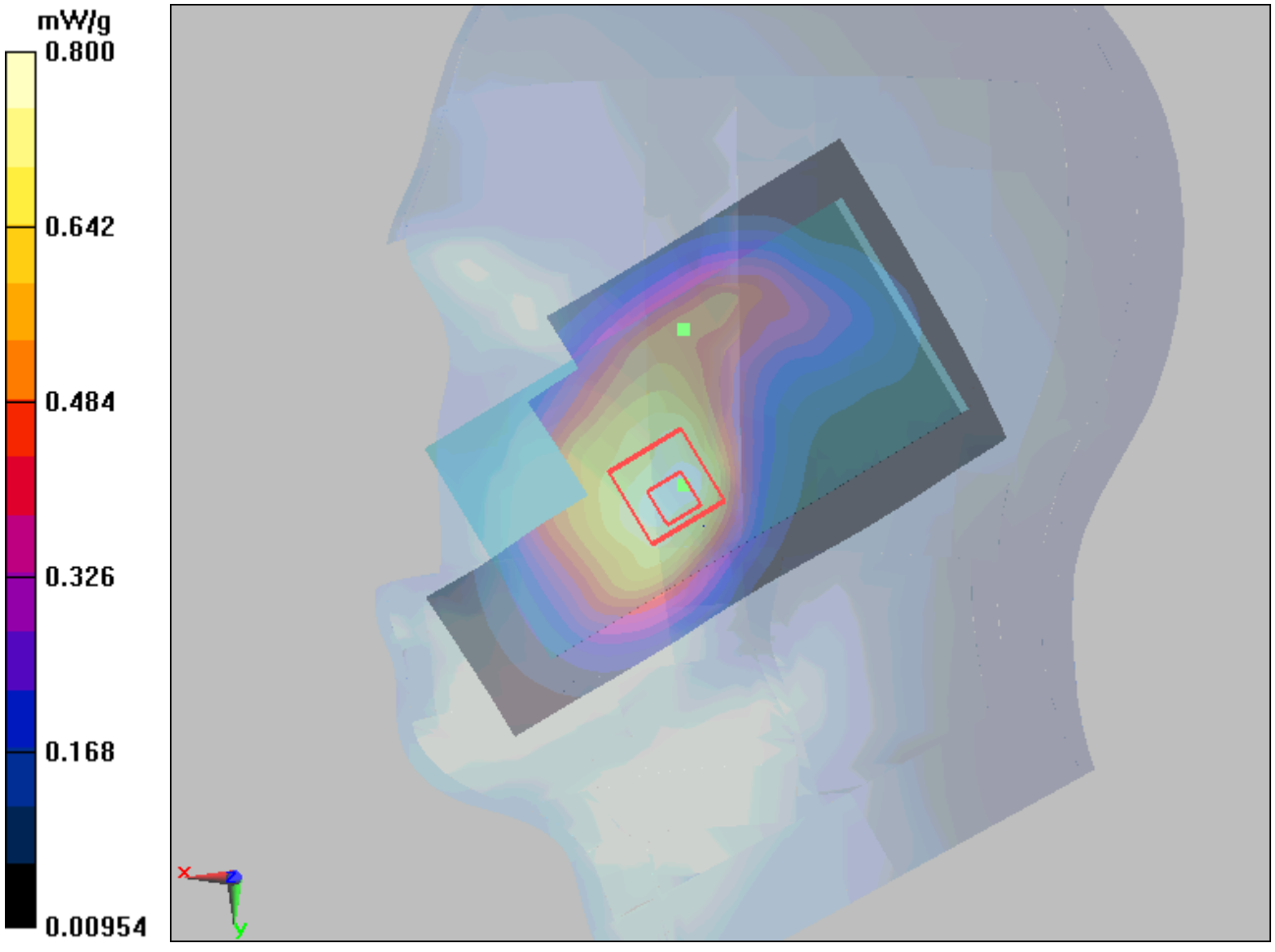


Figure 75 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Back Side High (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 11:32:37 AM
Communication System: LTE; Frequency: 1910 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1910 MHz; σ = 1.53 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side High(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.745 mW/g

Back side High(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.72 V/m; Power Drift = -0.00869 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.666 mW/g; SAR(10 g) = 0.416 mW/g
Maximum value of SAR (measured) = 0.711 mW/g

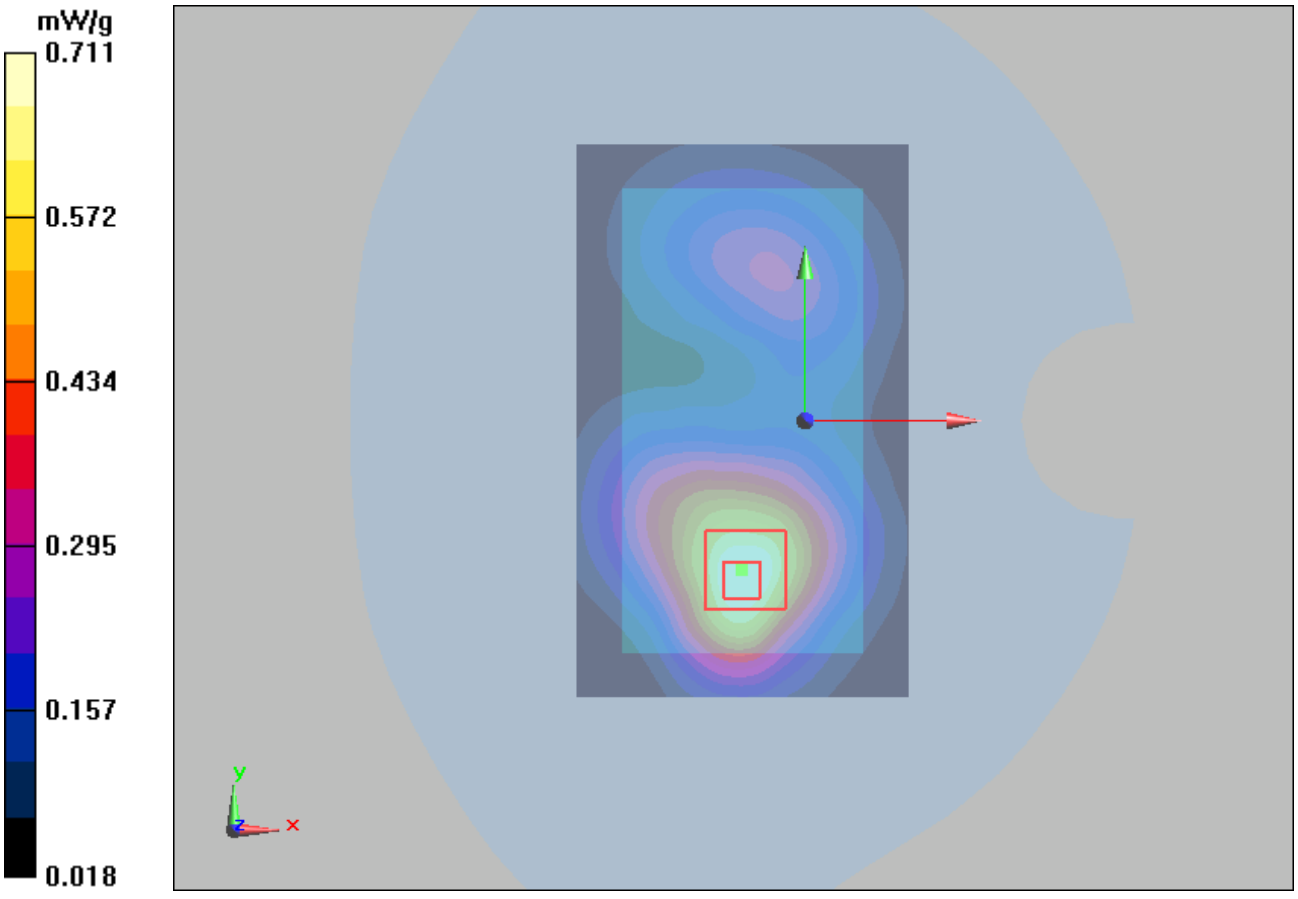


Figure 76 Body, LTE Band 25 with 1RB Back Side Channel 26640

LTE Band 25 with 1RB Back Side Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 10:29:54 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.770 mW/g

Back side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.09 V/m; Power Drift = -0.051 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.438 mW/g
Maximum value of SAR (measured) = 0.744 mW/g

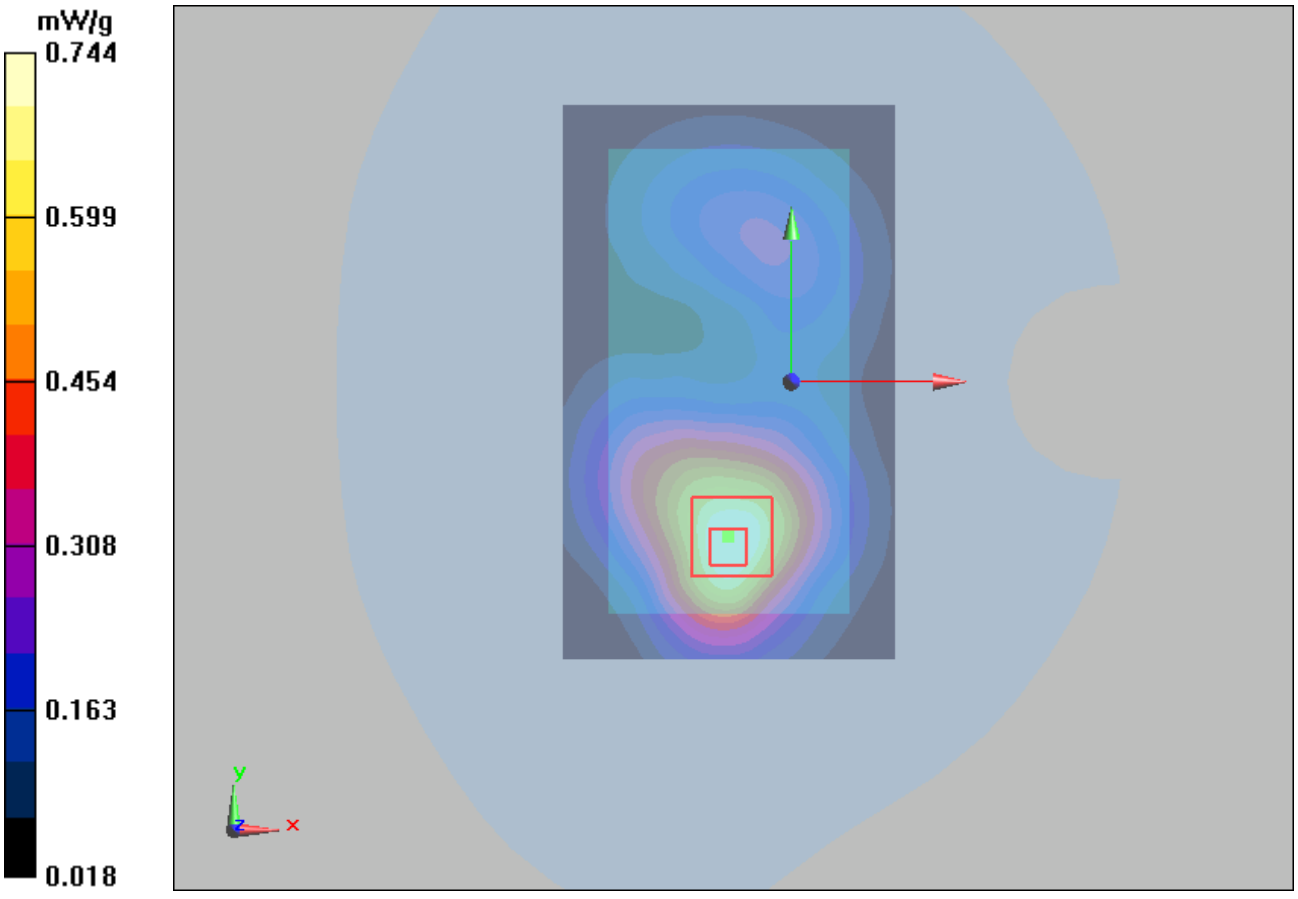


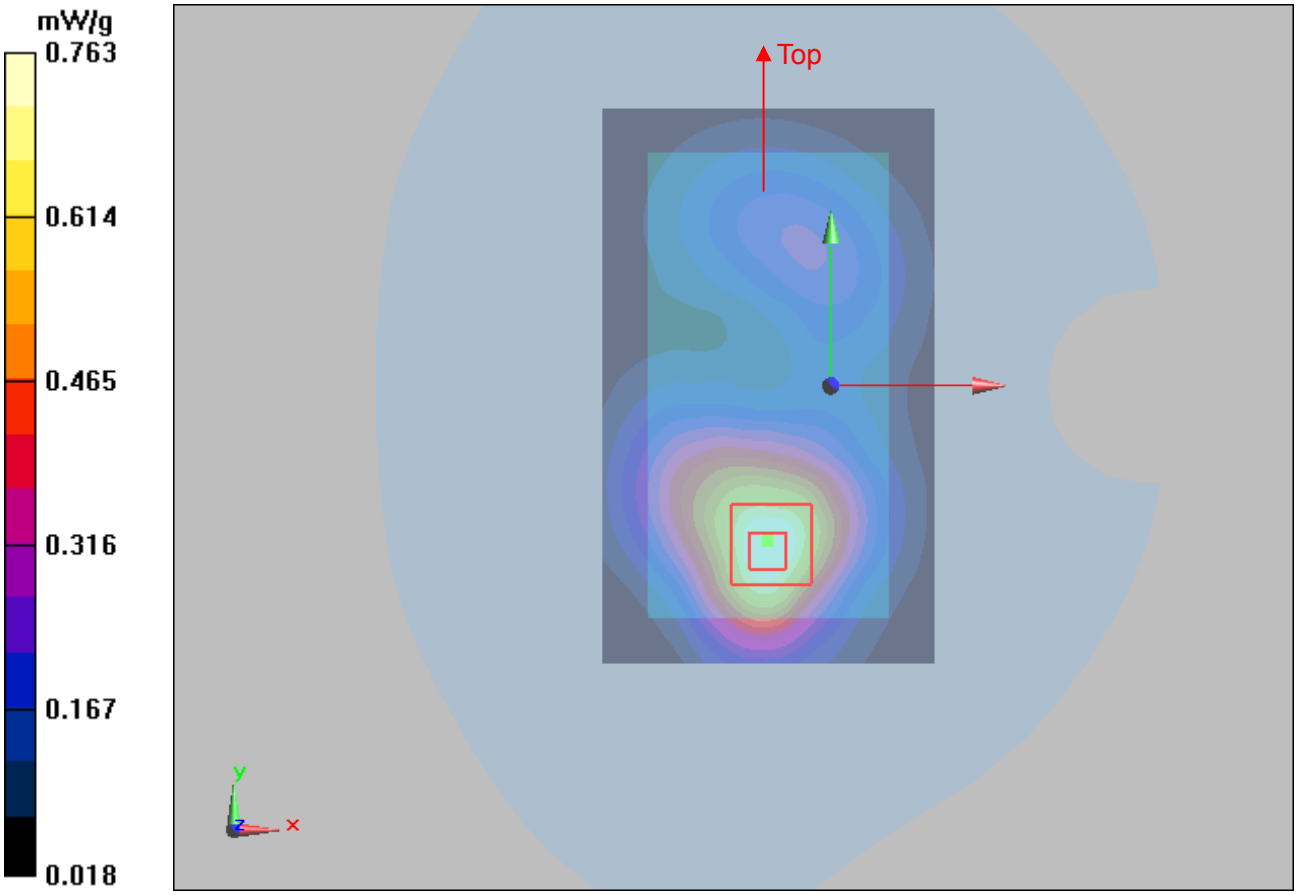
Figure 77 Body, LTE Band 25 with 1RB Back Side Channel 26365

LTE Band 25 with 1RB Back Side Low (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 10:01:38 AM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.788 mW/g

Back side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.95 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.446 mW/g
Maximum value of SAR (measured) = 0.763 mW/g



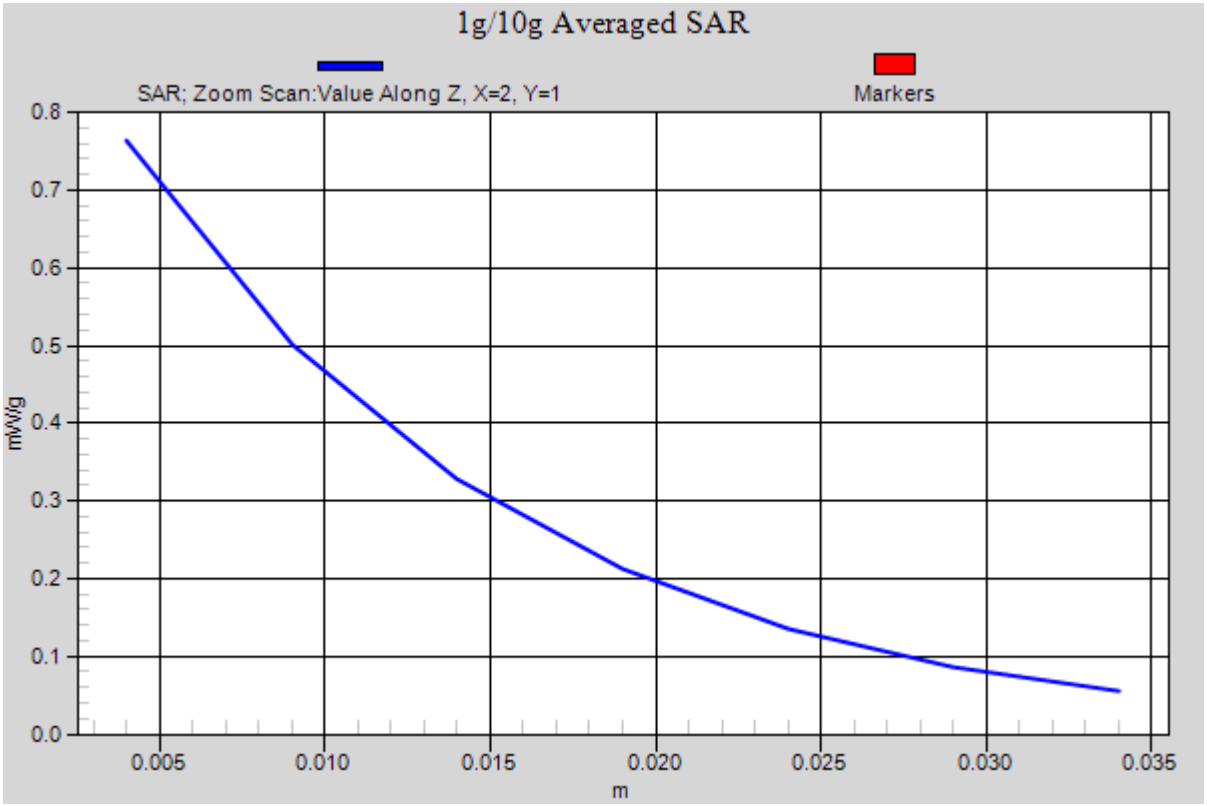


Figure 78 Body, LTE Band 25 with 1RB Back Side Channel 26090

LTE Band 25 with 1RB Front Side Low (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 12:32:07 PM

Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front Side Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.743 mW/g

Front side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.99 V/m; Power Drift = 0.121 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 0.738 mW/g

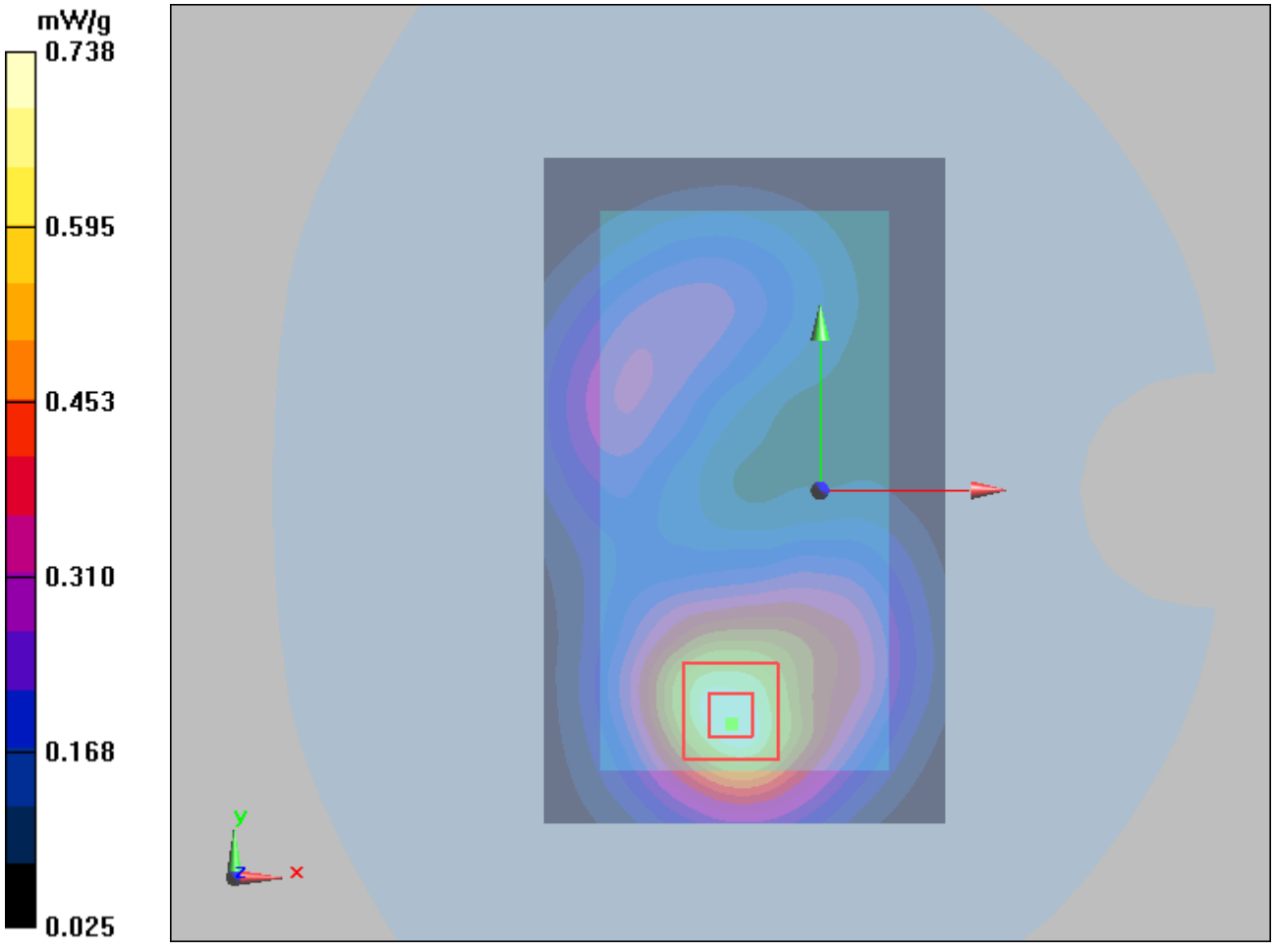


Figure 79 Body, LTE Band 25 with 1RB Front Side Channel 26090

LTE Band 25 with 1RB Back Side Low (10MHz, Battery 2, Full Power)

Date/Time: 2/25/2013 10:47:43 AM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.752 mW/g

Back side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.86 V/m; Power Drift = 0.059 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.426 mW/g
Maximum value of SAR (measured) = 0.726 mW/g

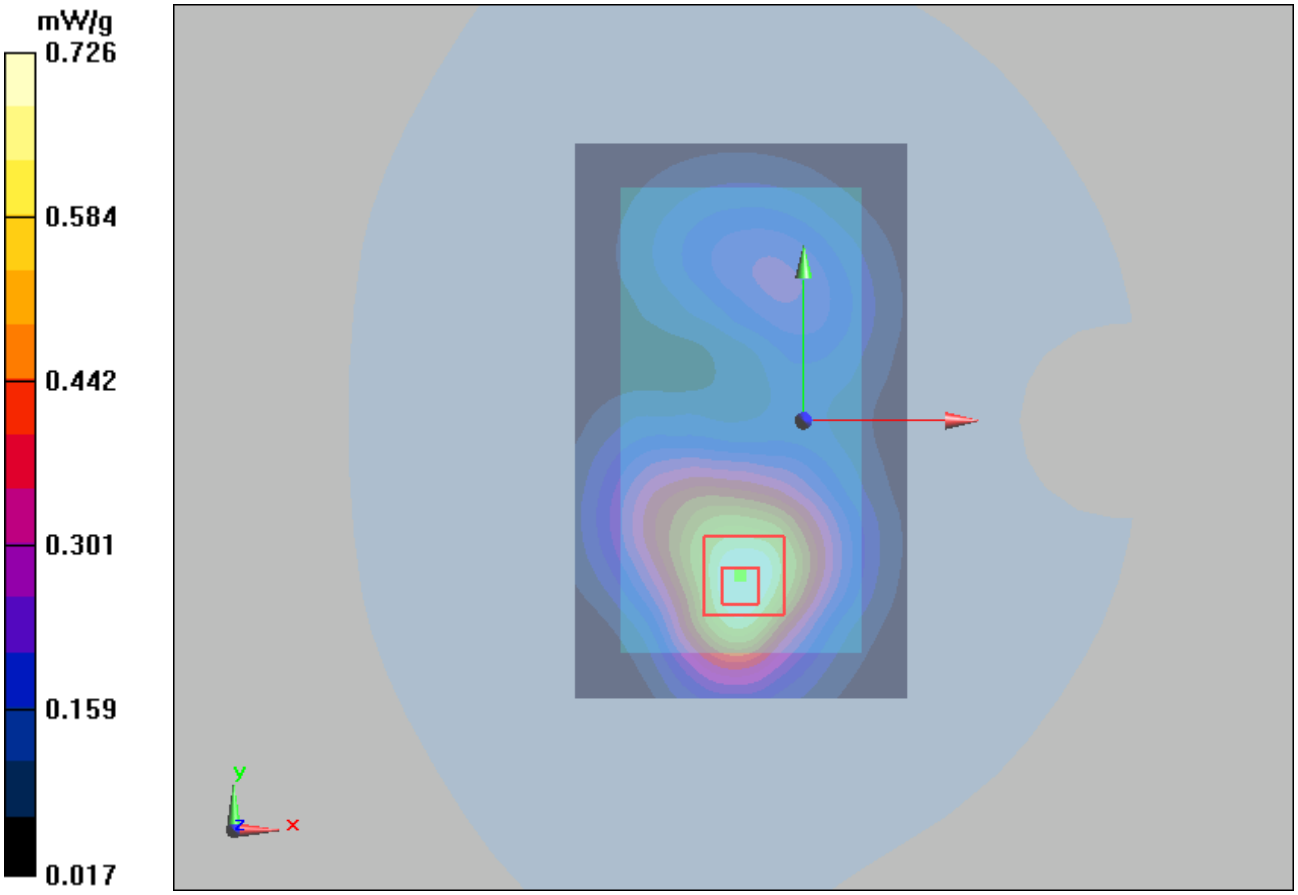


Figure 80 Body, LTE Band 25 with 1RB Back Side Channel 26090

LTE Band 25 with 50%RB Left Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 9:05:31 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.637 mW/g

Cheek Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.2 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.869 W/kg
SAR(1 g) = 0.584 mW/g; SAR(10 g) = 0.377 mW/g
Maximum value of SAR (measured) = 0.618 mW/g

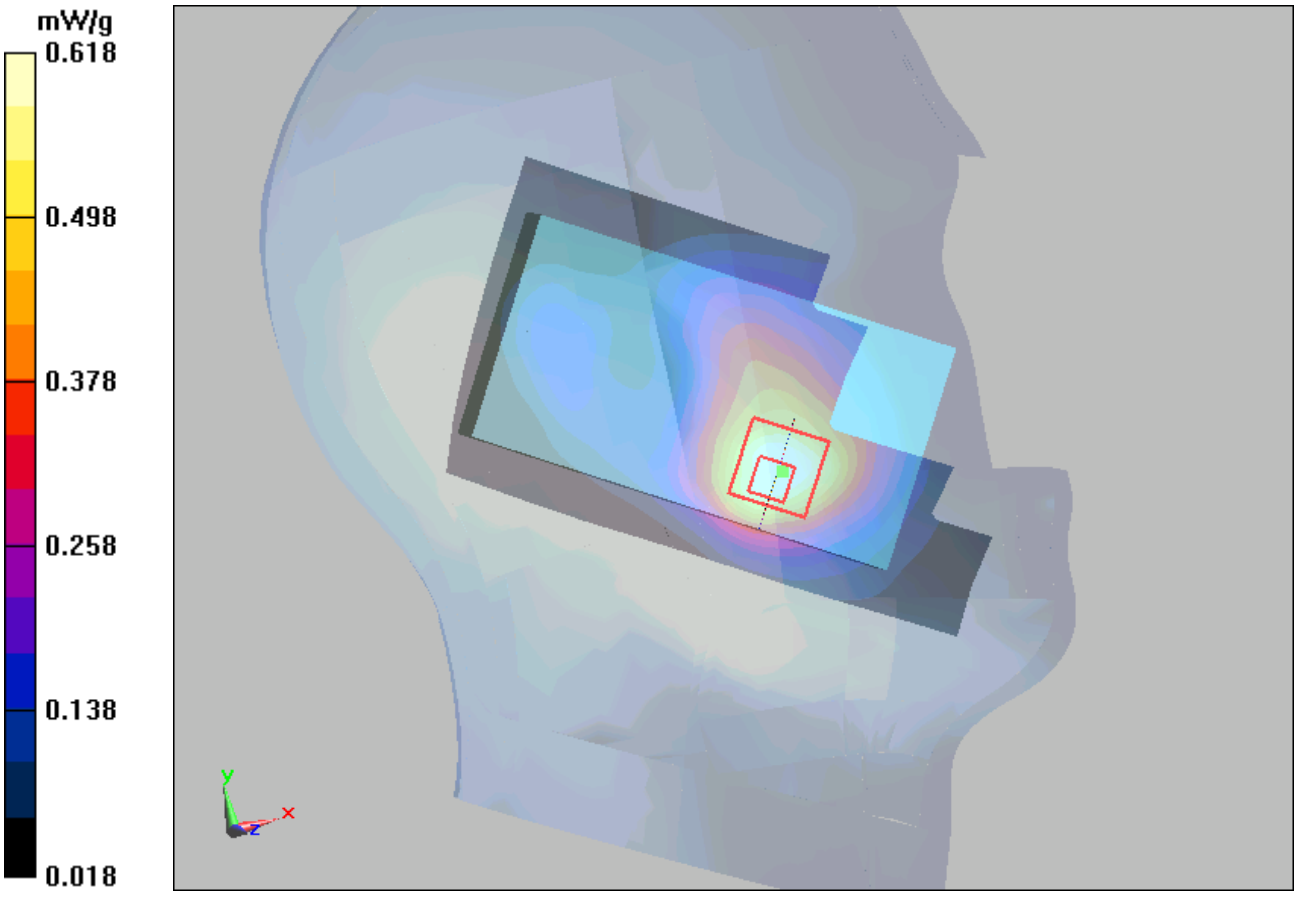


Figure 81 LTE Band 25 with 50%RB Left Hand Touch Cheek Channel 26365

LTE Band 25 with 50%RB Left Tilt Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 1:21:20 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.289 mW/g

Tilt Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = 0.049 dB
Peak SAR (extrapolated) = 0.432 W/kg
SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.148 mW/g
Maximum value of SAR (measured) = 0.279 mW/g

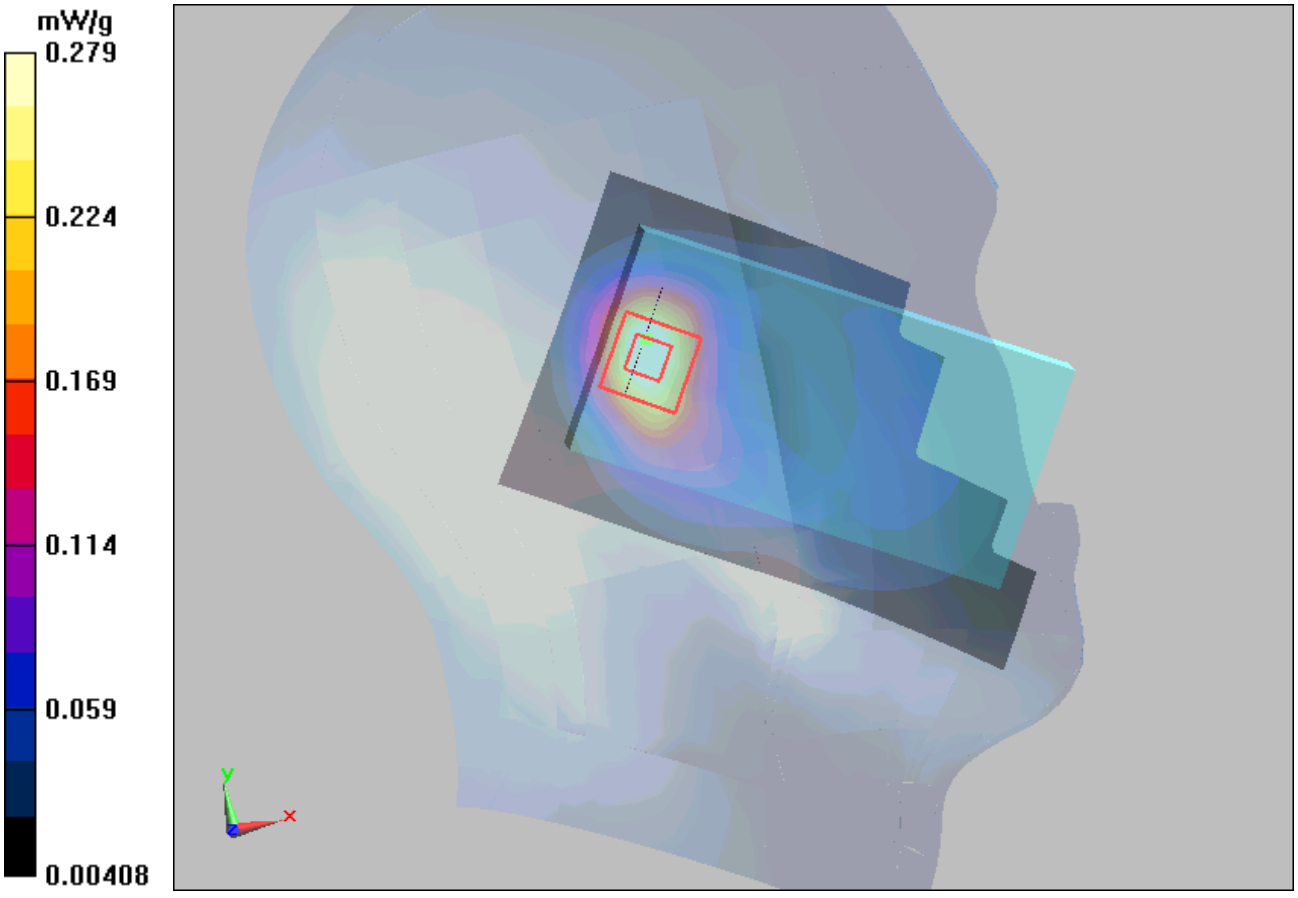


Figure 82 LTE Band 25 with 50%RB Left Hand Tilt 15° Channel 26365

LTE Band 25 with 50%RB Right Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 8:21:05 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.585 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.6 V/m; Power Drift = -0.073 dB
Peak SAR (extrapolated) = 0.885 W/kg
SAR(1 g) = 0.581 mW/g; SAR(10 g) = 0.375 mW/g
Maximum value of SAR (measured) = 0.620 mW/g

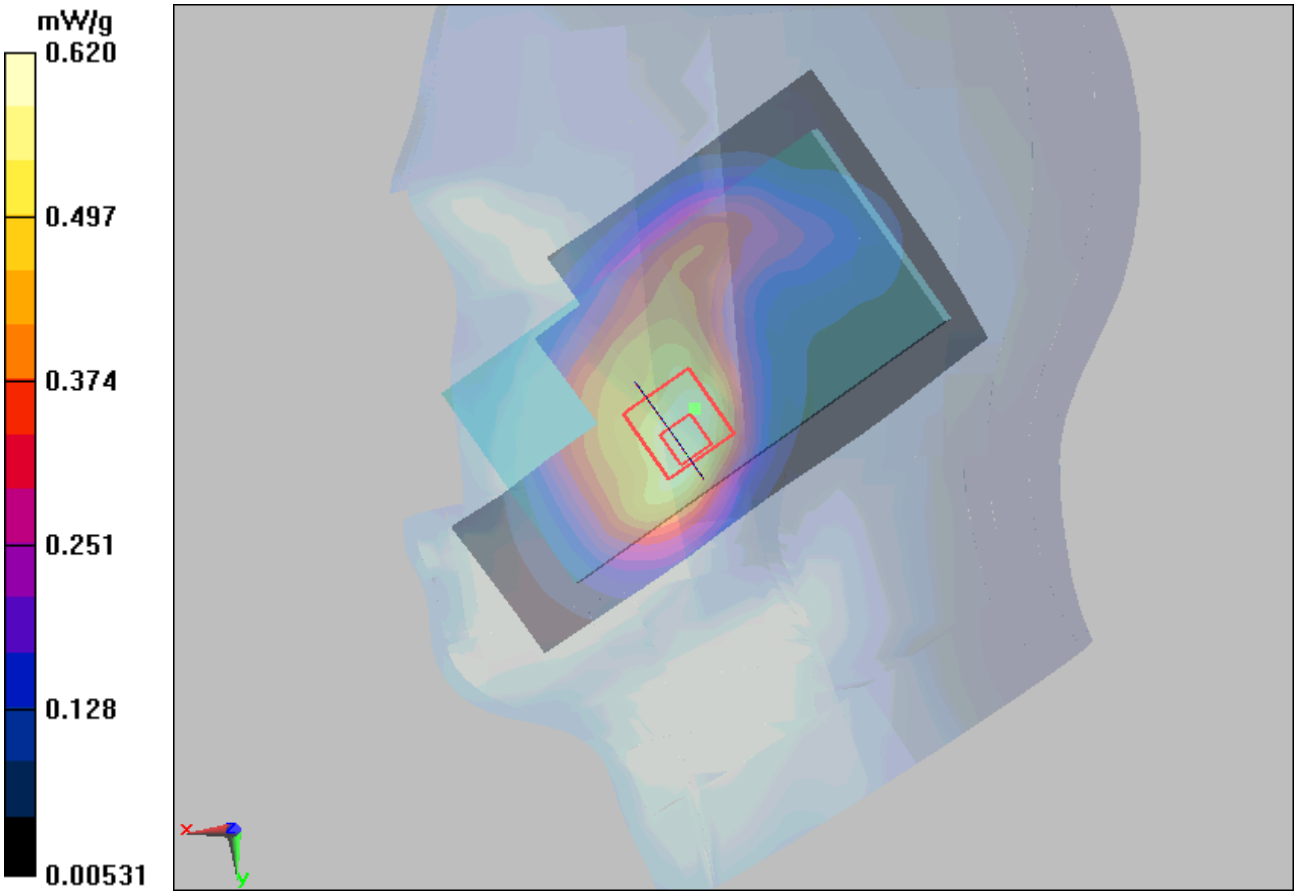


Figure 83 LTE Band 25 with 50%RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 50%RB Right Tilt Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 9:38:38 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.397 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.9 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.570 W/kg
SAR(1 g) = 0.360 mW/g; SAR(10 g) = 0.219 mW/g
Maximum value of SAR (measured) = 0.391 mW/g

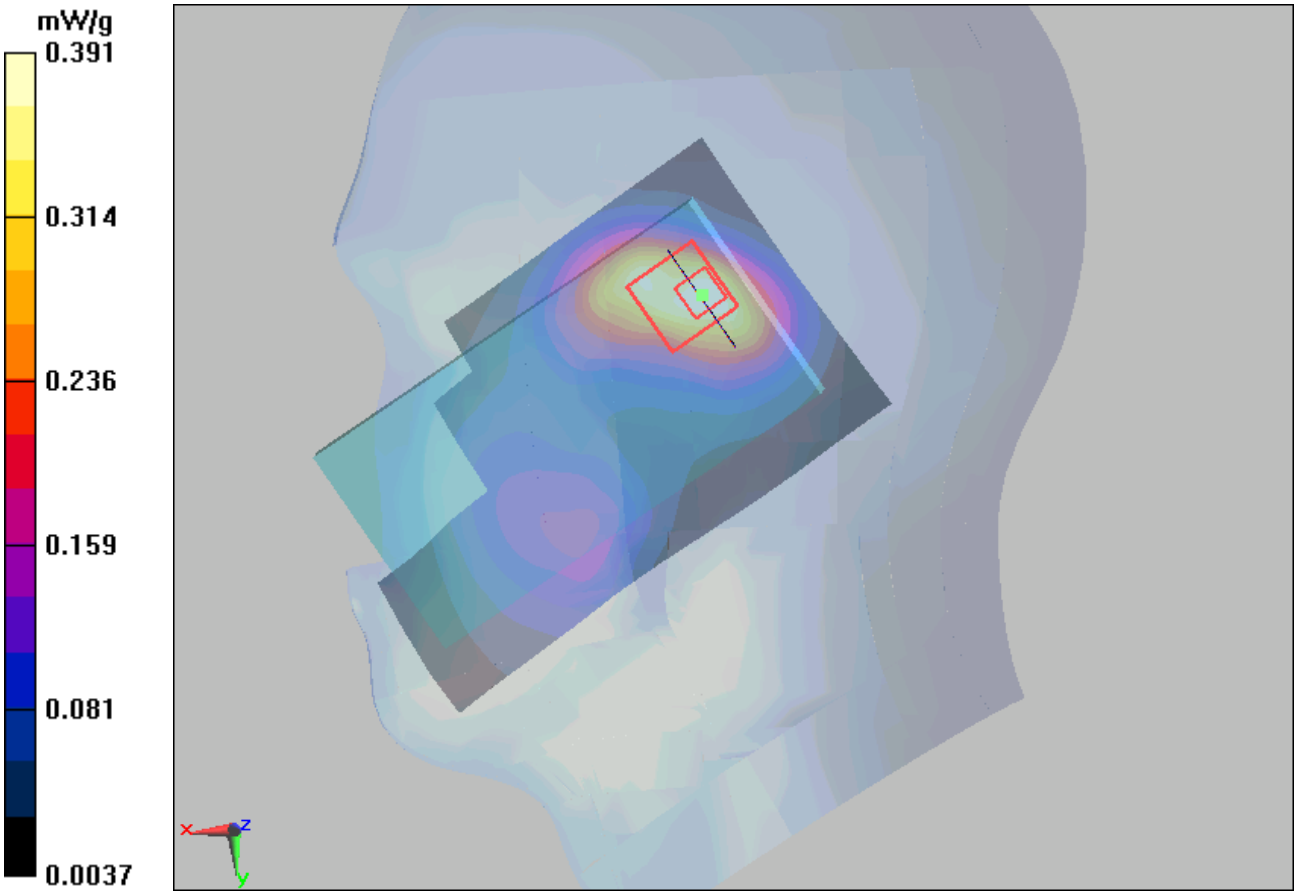


Figure 84 LTE Band 25 with 50%RB Right Hand Tilt 15° Channel 26365

LTE Band 25 with 50%RB Back Side Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 1:13:48 PM

Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.592 mW/g

Back side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.87 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.862 W/kg

SAR(1 g) = 0.559 mW/g; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 0.604 mW/g

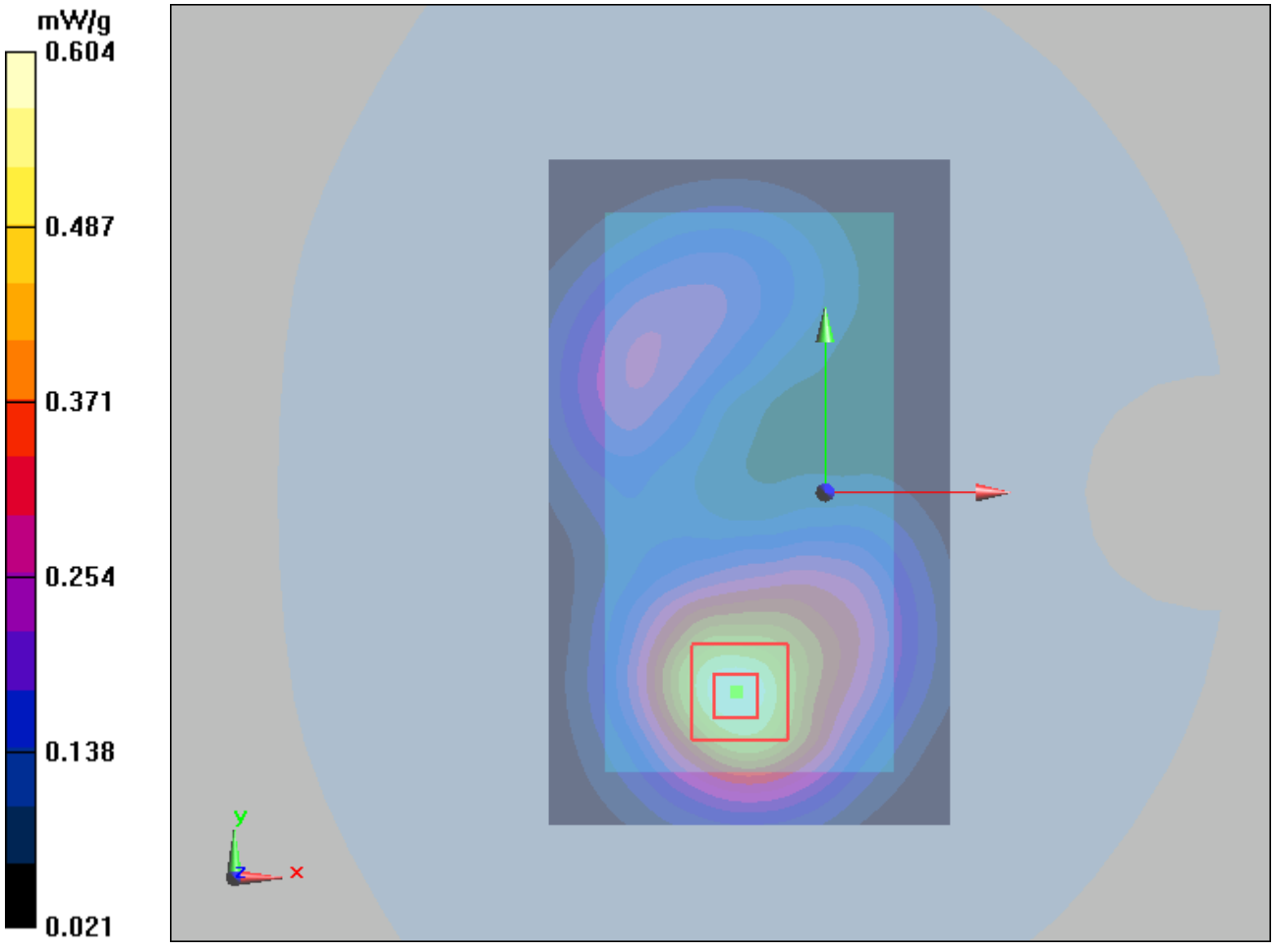


Figure 85 Body, LTE Band 25 with 50%RB Back Side Channel 26365

LTE Band 25 with 50%RB Front Side Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 1:31:00 PM

Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.564 mW/g

Front side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.07 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.811 W/kg

SAR(1 g) = 0.525 mW/g; SAR(10 g) = 0.329 mW/g

Maximum value of SAR (measured) = 0.565 mW/g

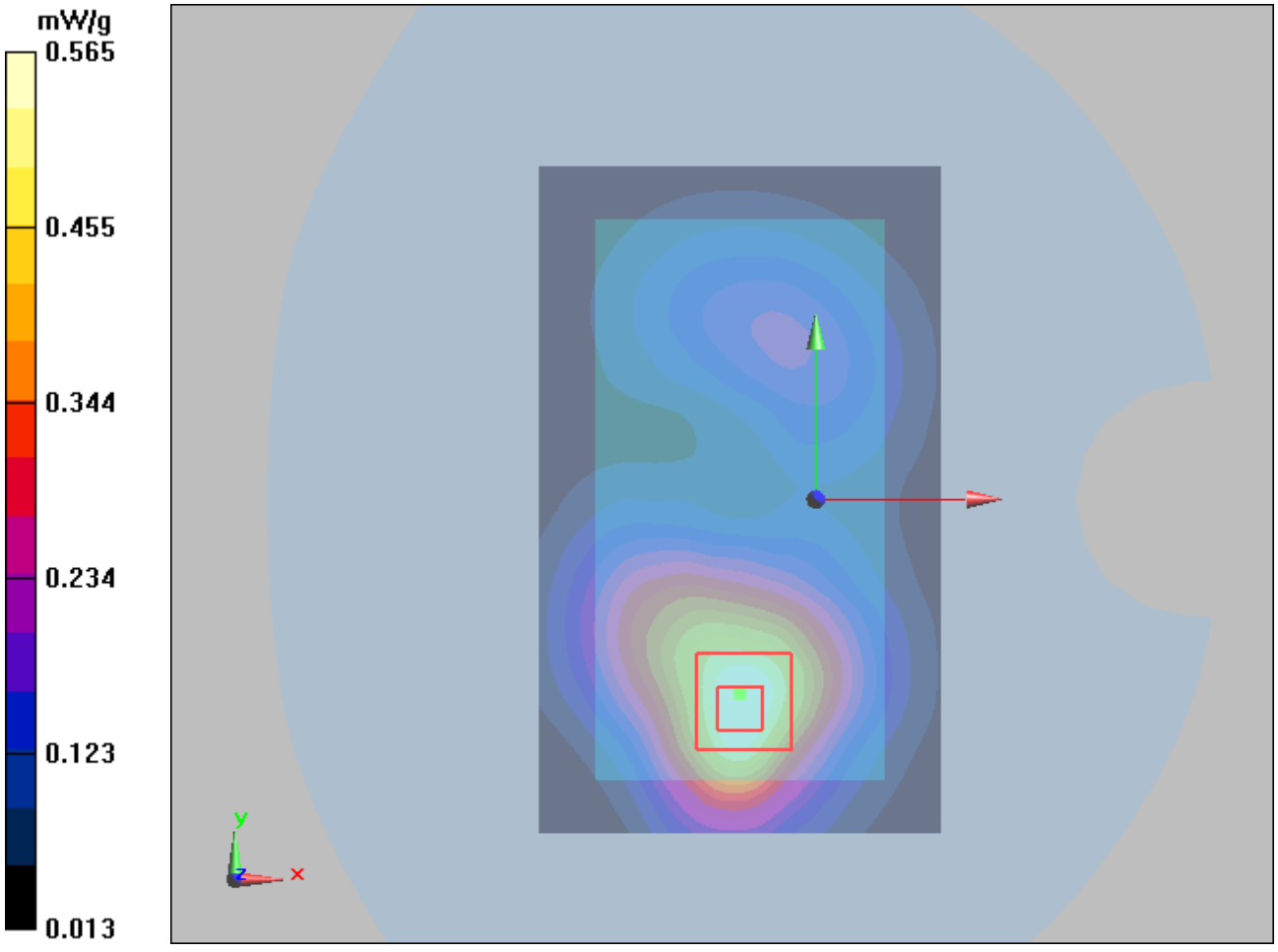


Figure 86 Body, LTE Band 25 with 50%RB Front Side Channel 26365

LTE Band 25 with 100%RB Left Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 9:55:57 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.643 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.7 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.863 W/kg
SAR(1 g) = 0.585 mW/g; SAR(10 g) = 0.379 mW/g
Maximum value of SAR (measured) = 0.612 mW/g

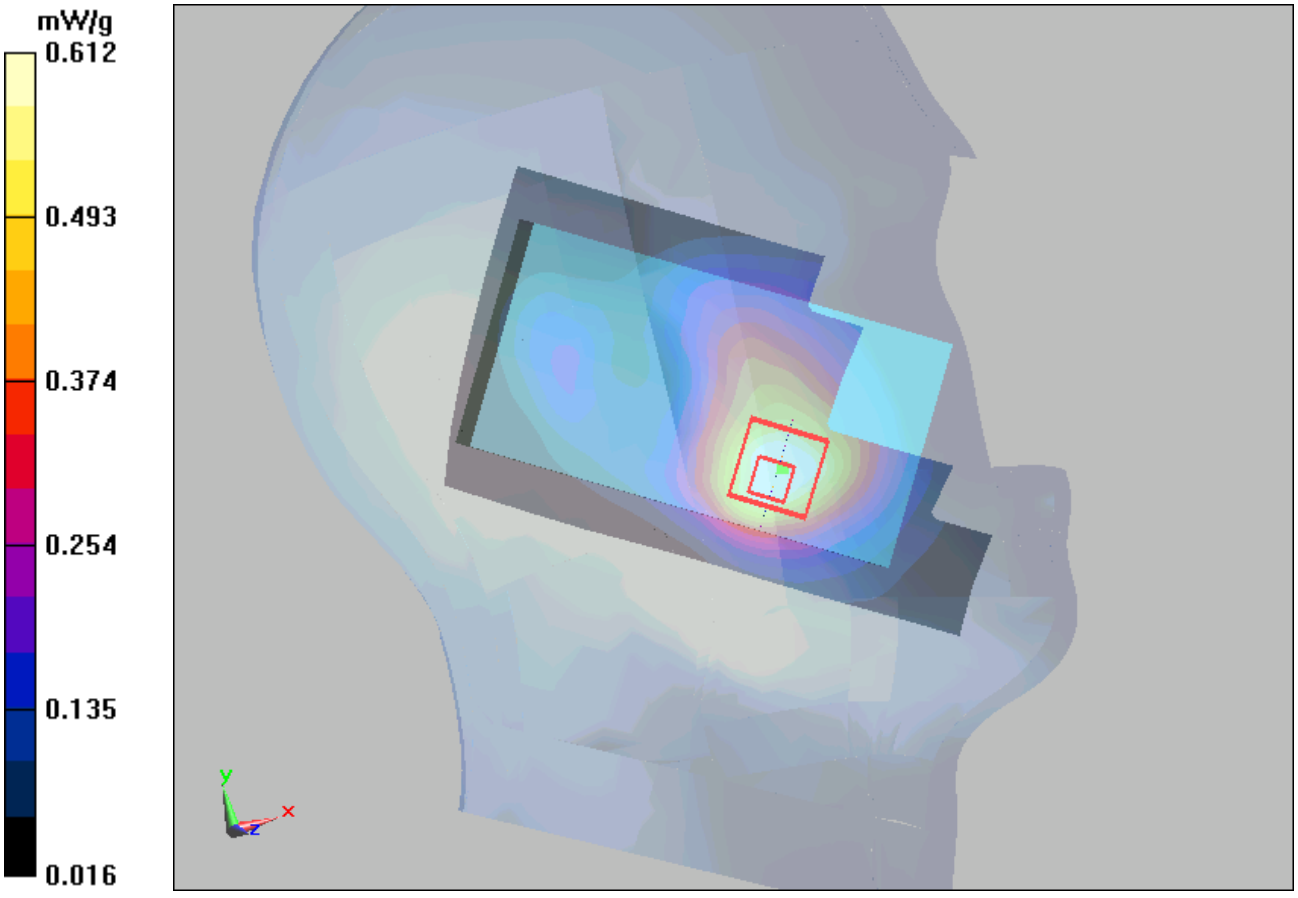


Figure 87 LTE Band 25 with 100%**RB Left Hand Touch Cheek Channel 26365**

LTE Band 25 with 100%RB Left Tilt Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:12:45 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.400 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.8 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 0.585 W/kg
SAR(1 g) = 0.354 mW/g; SAR(10 g) = 0.202 mW/g
Maximum value of SAR (measured) = 0.366 mW/g

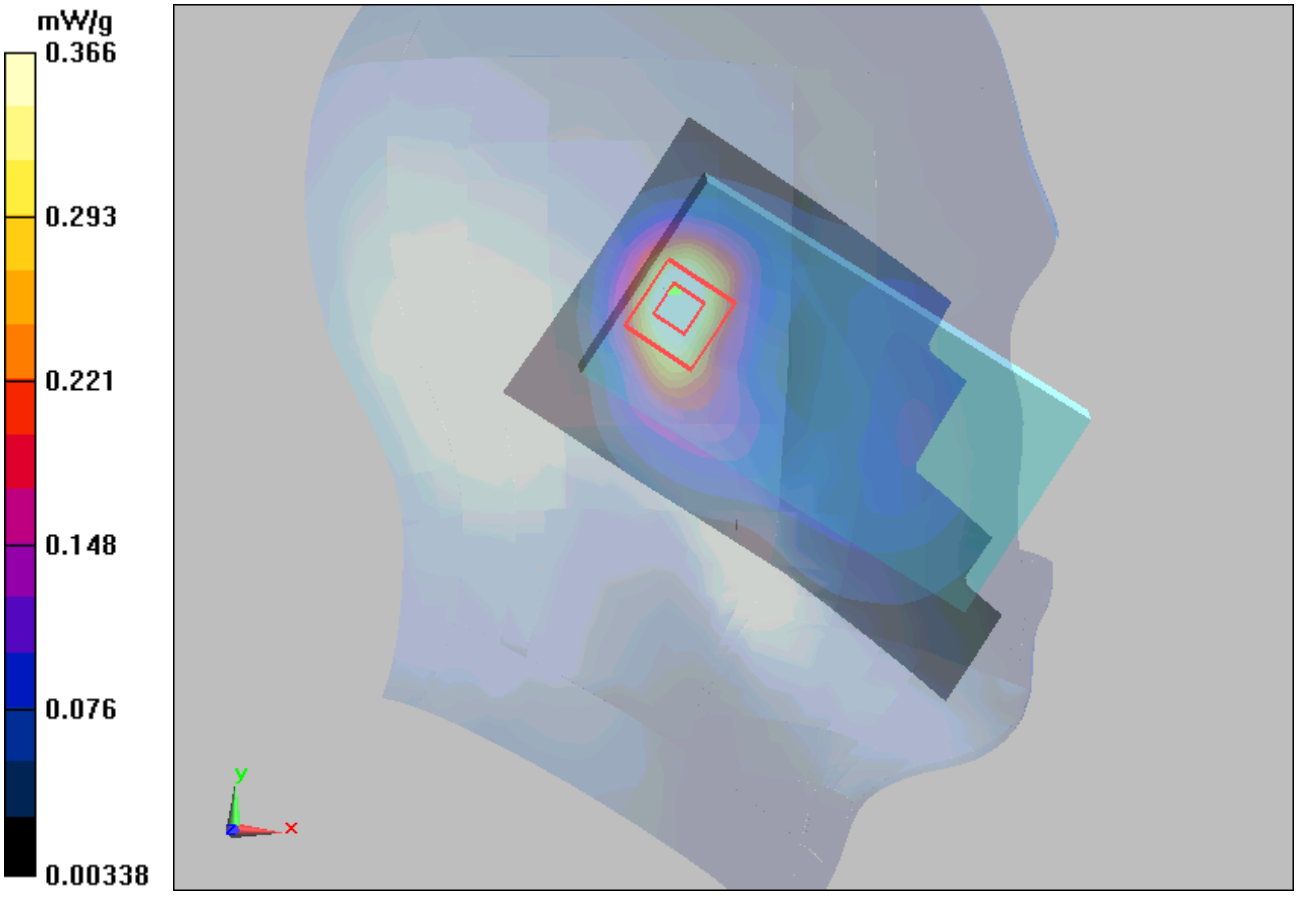


Figure 88 LTE Band 25 with 100%RB Left Hand Tilt 15° Channel 26365

LTE Band 25 with 100%RB Right Cheek Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:27:46 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.598 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.4 V/m; Power Drift = -0.026 dB
Peak SAR (extrapolated) = 0.891 W/kg
SAR(1 g) = 0.585 mW/g; SAR(10 g) = 0.379 mW/g
Maximum value of SAR (measured) = 0.622 mW/g

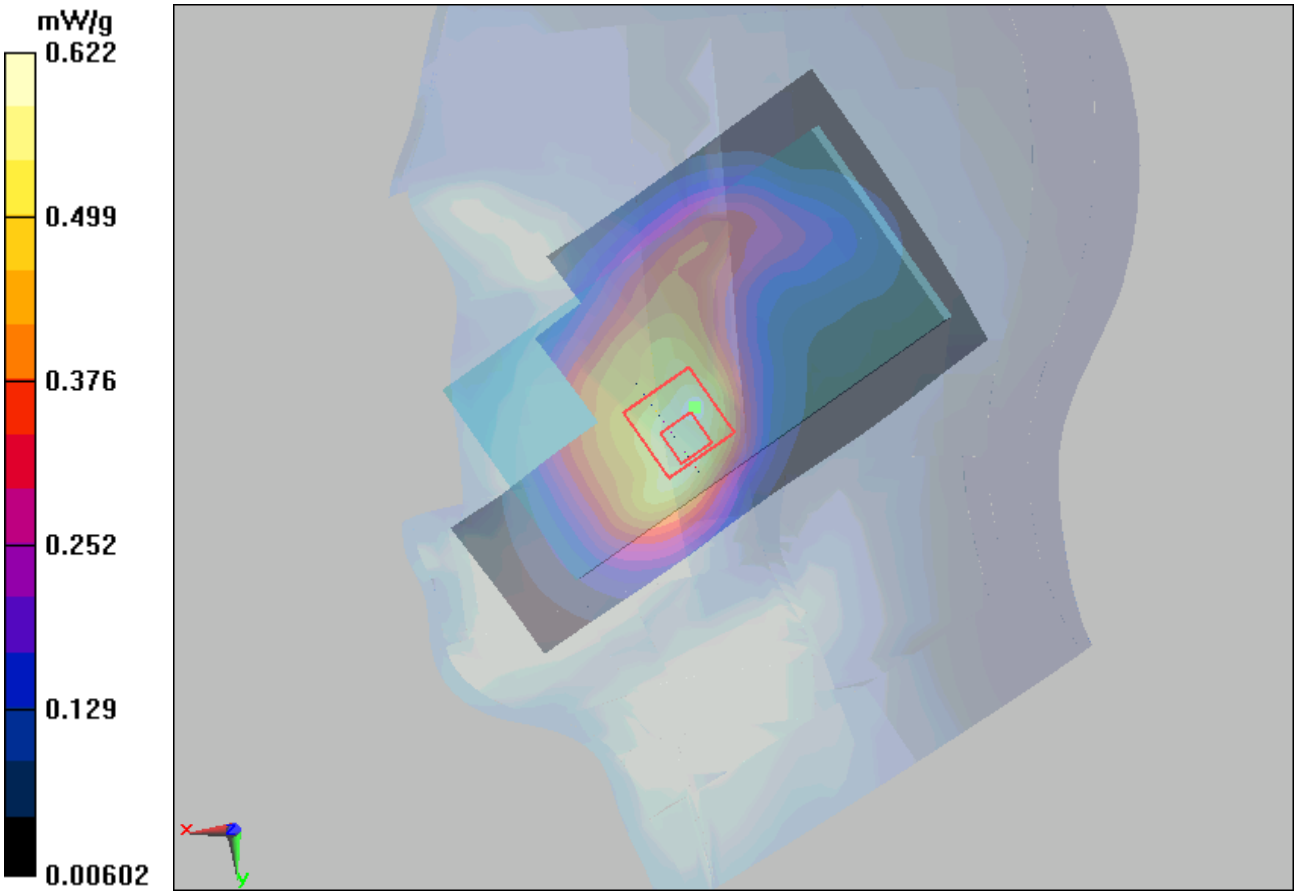


Figure 89 LTE Band 25 with 100%RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 100%RB Right Tilt Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/24/2013 10:42:57 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.414 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16 V/m; Power Drift = -0.00737 dB
Peak SAR (extrapolated) = 0.595 W/kg
SAR(1 g) = 0.371 mW/g; SAR(10 g) = 0.226 mW/g
Maximum value of SAR (measured) = 0.400 mW/g

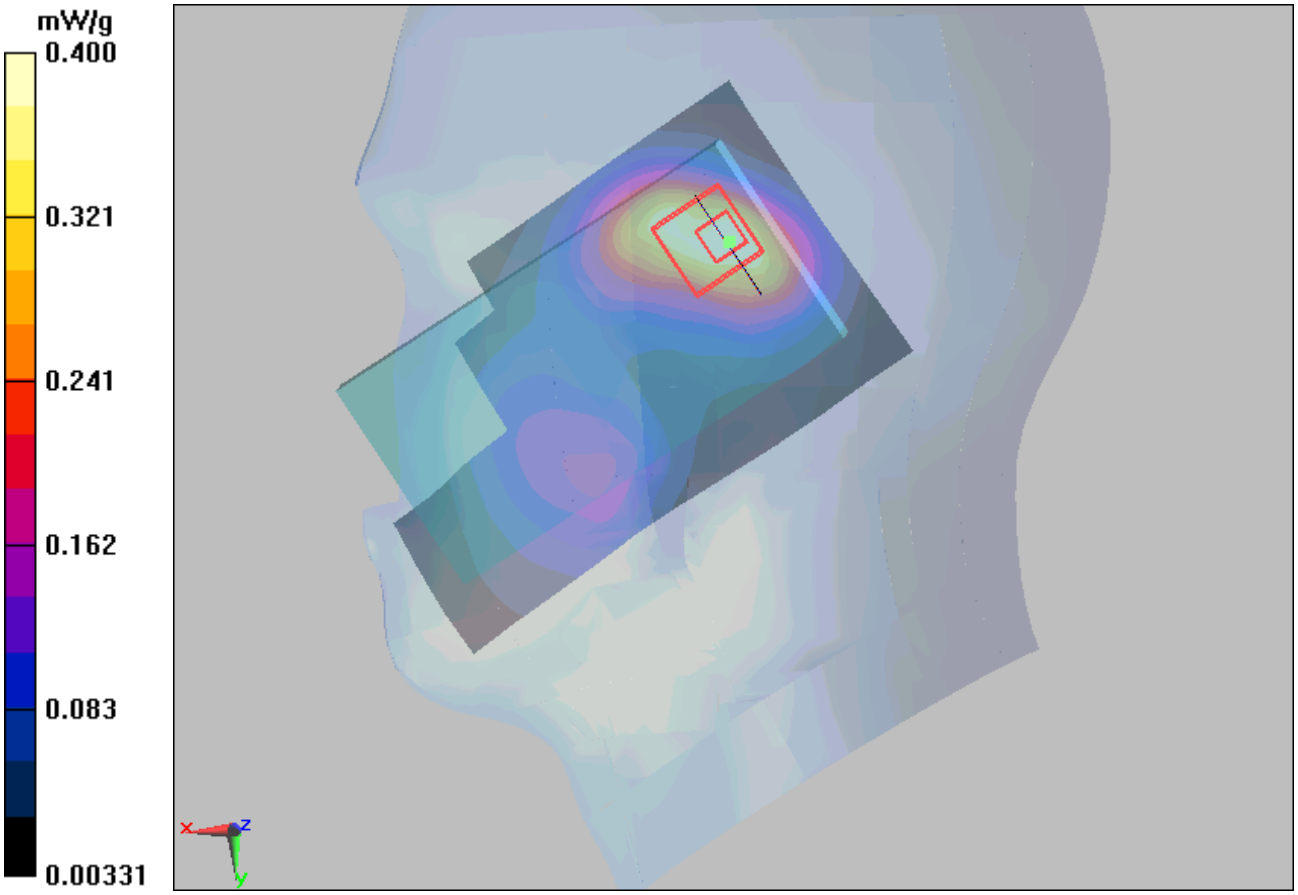


Figure 90 LTE Band 25 with 100%RB Right Hand Tilt 15° Channel 26365

LTE Band 25 with 100%RB Back Side Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 11:05:24 AM

Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.611 mW/g

Front side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.18 V/m; Power Drift = -0.066 dB

Peak SAR (extrapolated) = 0.860 W/kg

SAR(1 g) = 0.557 mW/g; SAR(10 g) = 0.347 mW/g

Maximum value of SAR (measured) = 0.598 mW/g

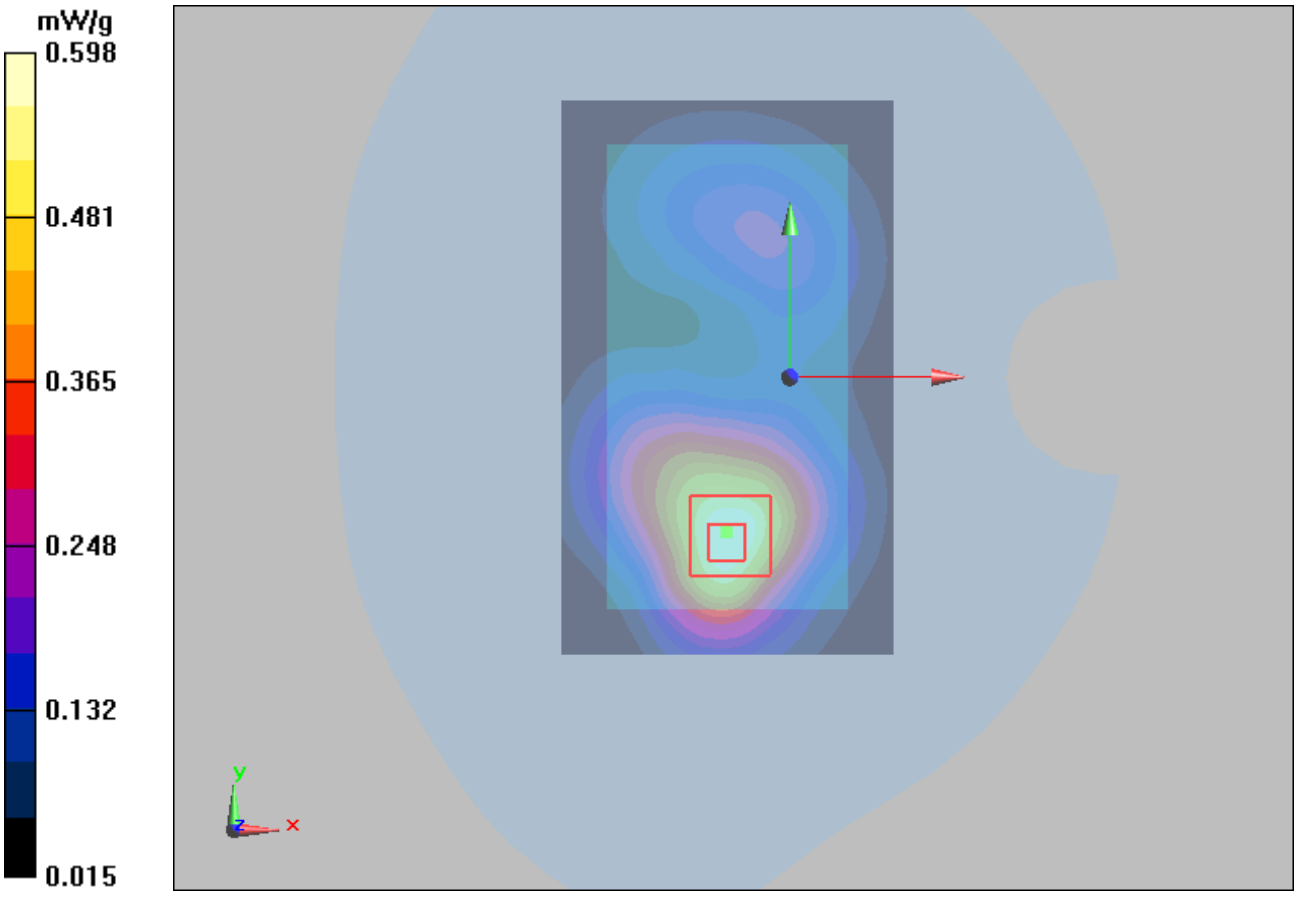


Figure 91 Body, LTE Band 25 with 100%RB Back Side Channel 26365

LTE Band 25 with 100%RB Front Side Middle (10MHz, Battery 1, Full Power)

Date/Time: 2/25/2013 11:54:17 PM

Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.569 mW/g

Front side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.51 V/m; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 0.839 W/kg

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.336 mW/g

Maximum value of SAR (measured) = 0.588 mW/g

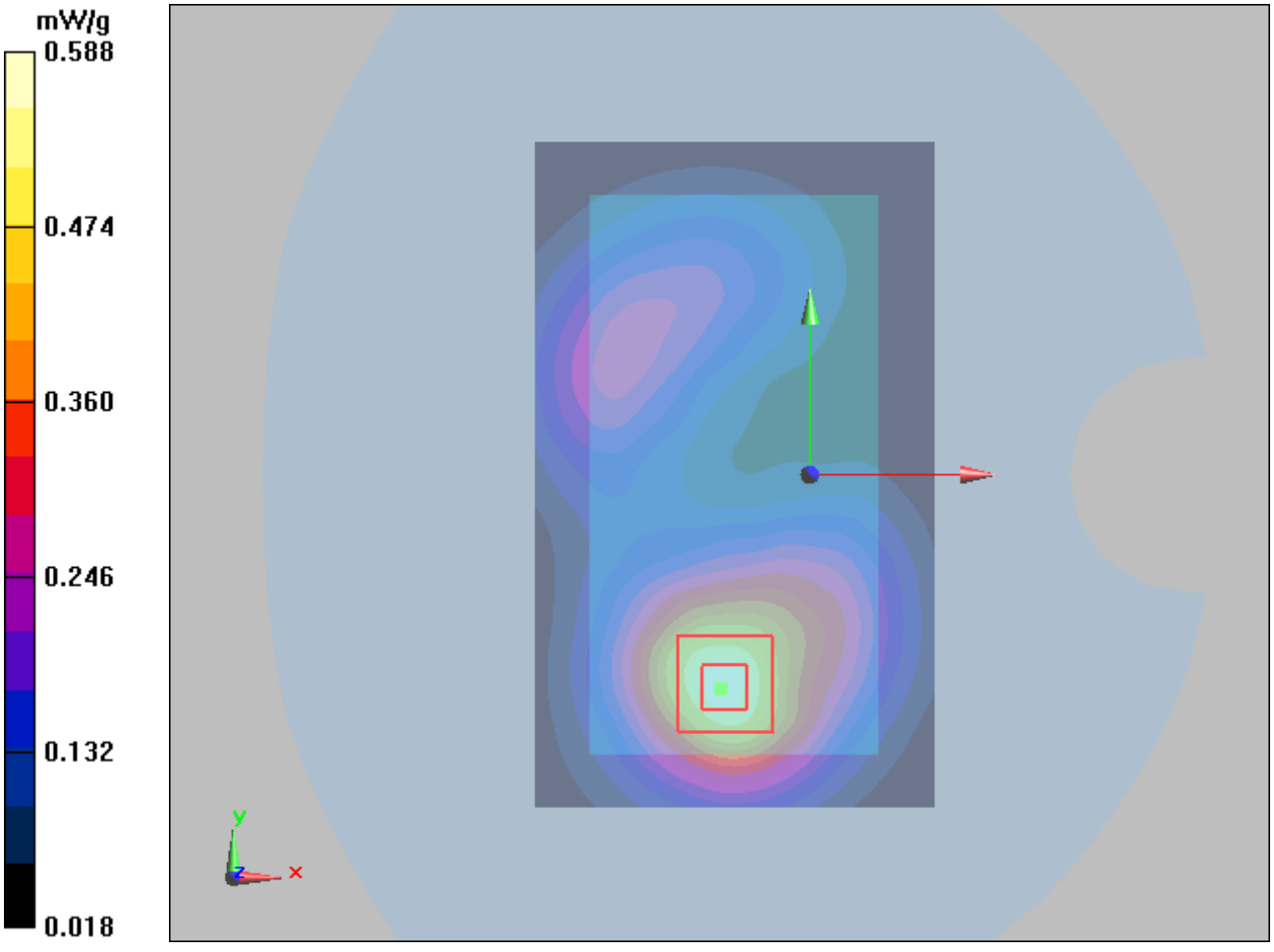


Figure 92 Body, LTE Band 25 with 100%RB Front Side Channel 26365

LTE Band 25 with 1RB Right Cheek Middle (10MHz, Battery 1, Full Power, 1st Repeated Test)

Date/Time: 2/24/2013 11:00:00 AM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.783 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.4 V/m; Power Drift = -0.131 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.768 mW/g; SAR(10 g) = 0.508 mW/g
Maximum value of SAR (measured) = 0.812 mW/g

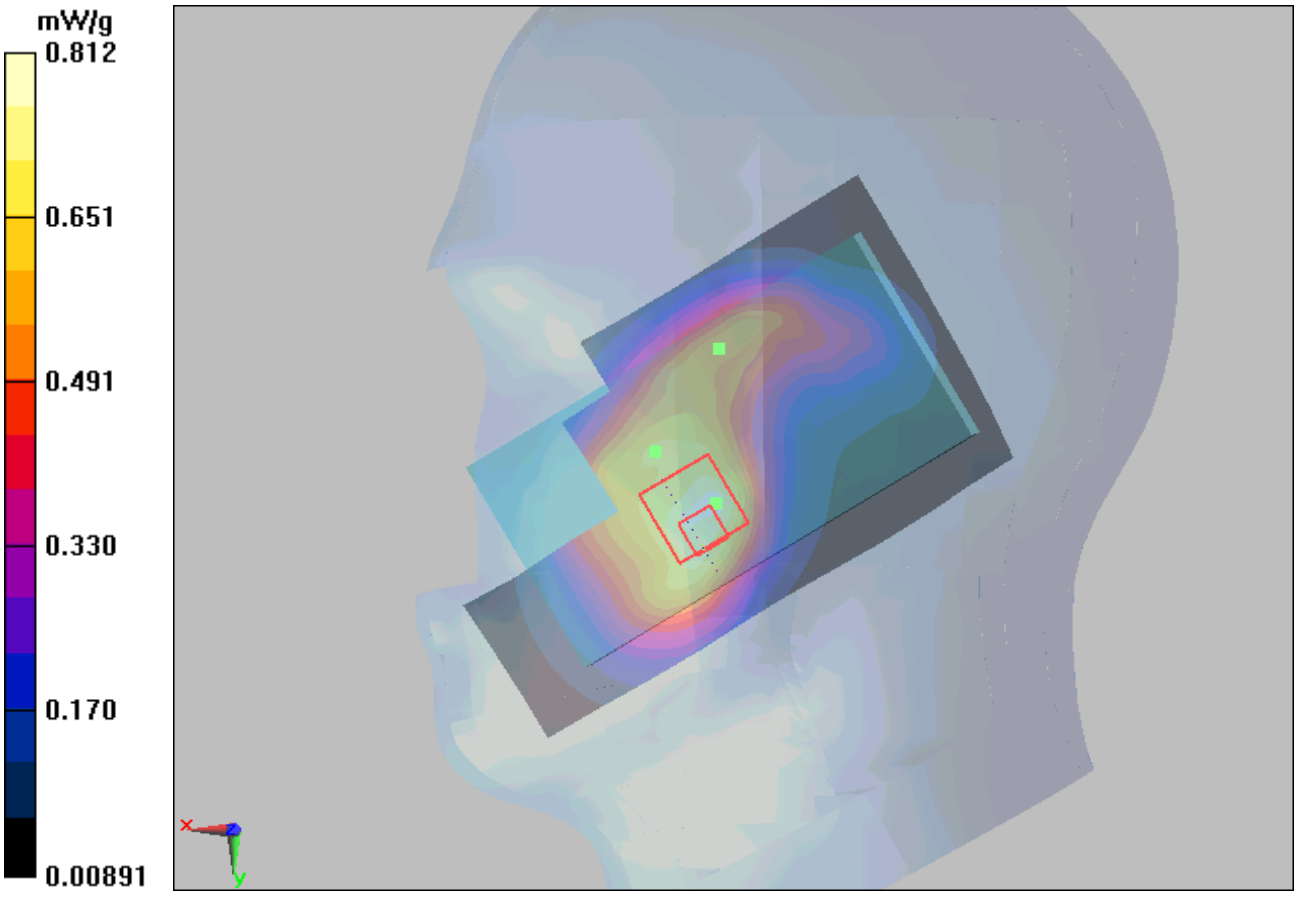


Figure 93 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Left Cheek Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 3:39:29 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.238 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.79 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 0.339 W/kg
SAR(1 g) = 0.215 mW/g; SAR(10 g) = 0.133 mW/g
Maximum value of SAR (measured) = 0.225 mW/g

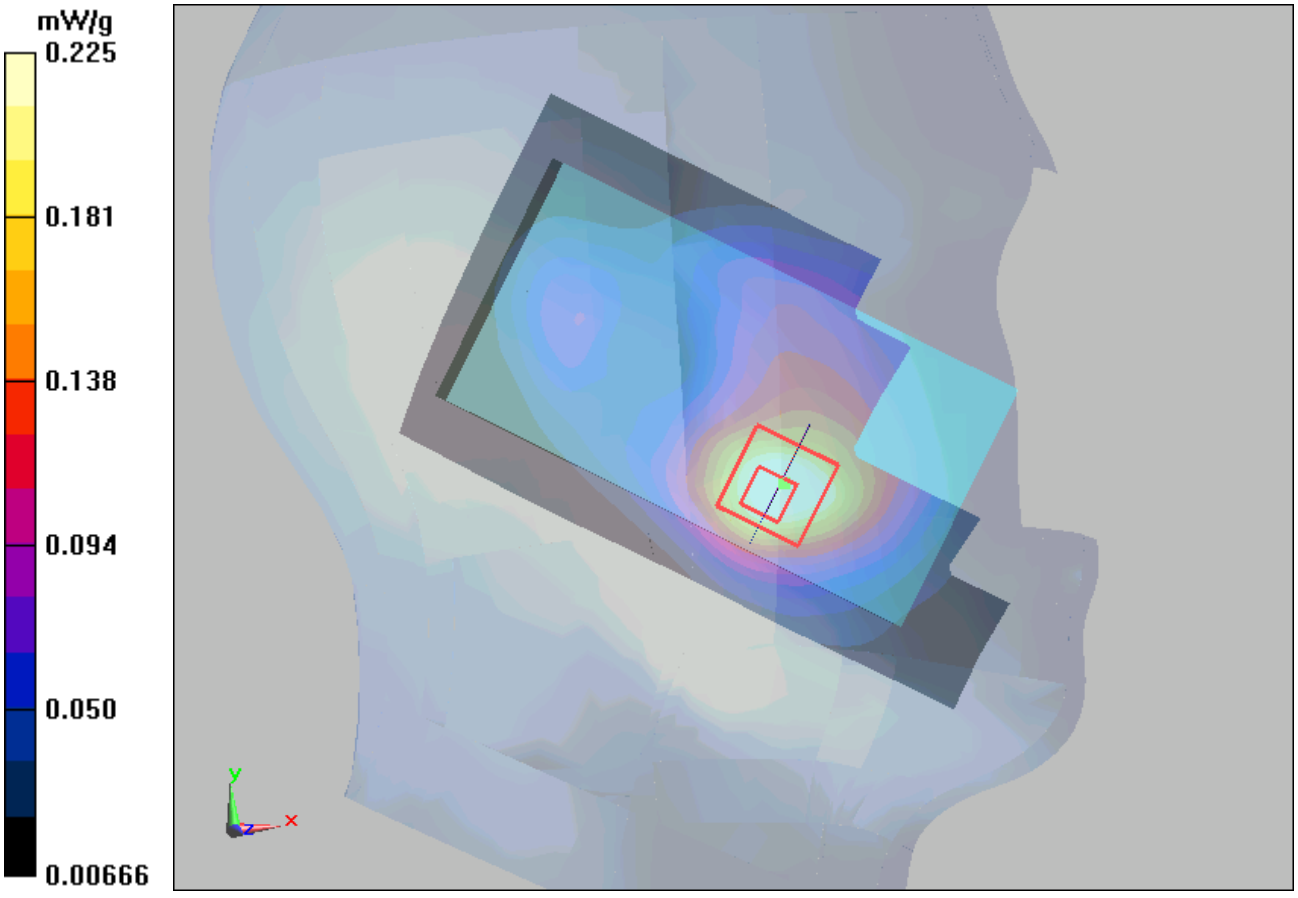


Figure 94 LTE Band 25 with 1RB Left Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Left Tilt Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 3:56:21 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.152 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.66 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 0.229 W/kg
SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.078 mW/g
Maximum value of SAR (measured) = 0.149 mW/g

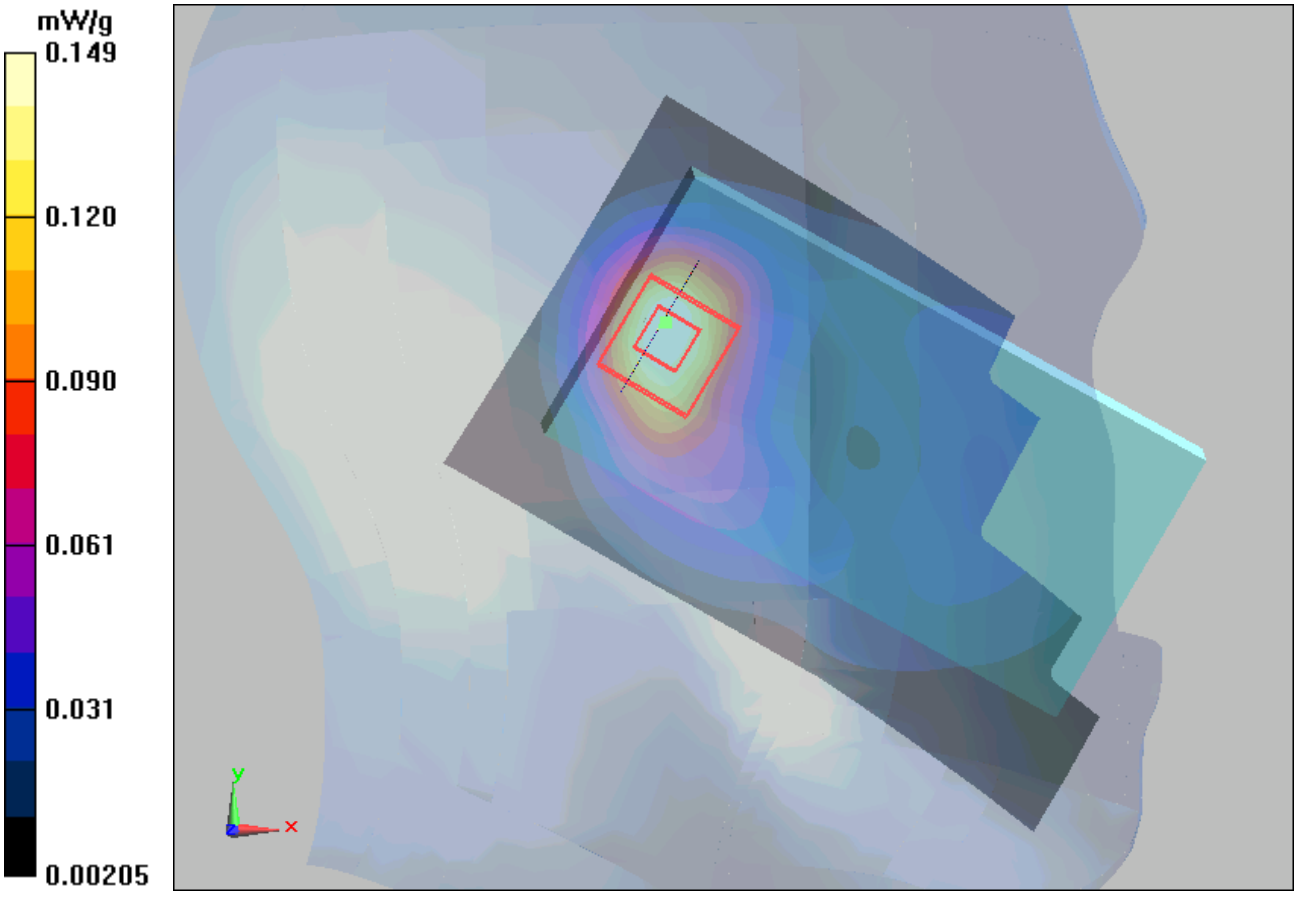


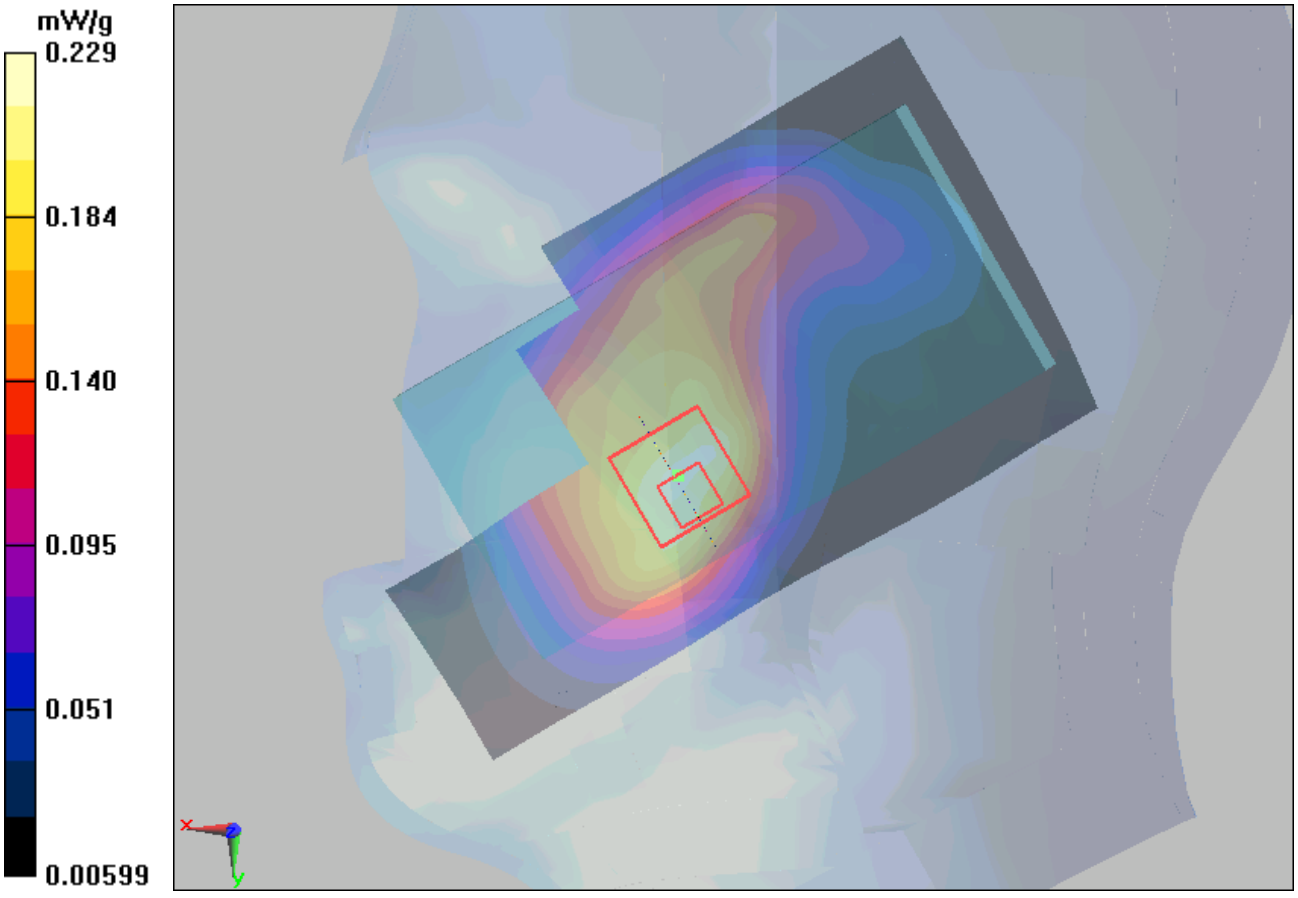
Figure 95 LTE Band 25 with 1RB Left Hand Tilt 15° Channel 26365

LTE Band 25 with 1RB Right Cheek Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 4:27:31 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.220 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.19 V/m; Power Drift = 0.113 dB
Peak SAR (extrapolated) = 0.341 W/kg
SAR(1 g) = 0.219 mW/g; SAR(10 g) = 0.141 mW/g
Maximum value of SAR (measured) = 0.229 mW/g



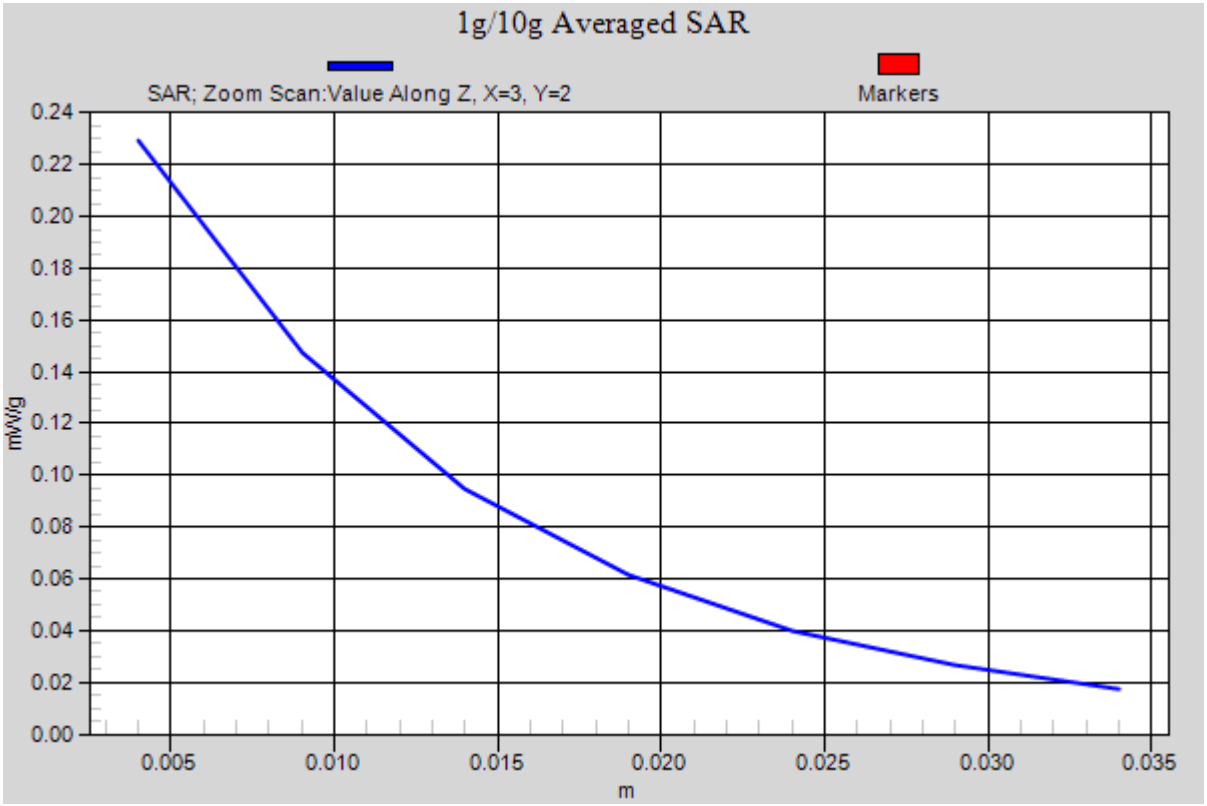


Figure 96 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Right Tilt Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 4:41:25 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.159 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.82 V/m; Power Drift = 0.084 dB
Peak SAR (extrapolated) = 0.226 W/kg
SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.085 mW/g
Maximum value of SAR (measured) = 0.154 mW/g

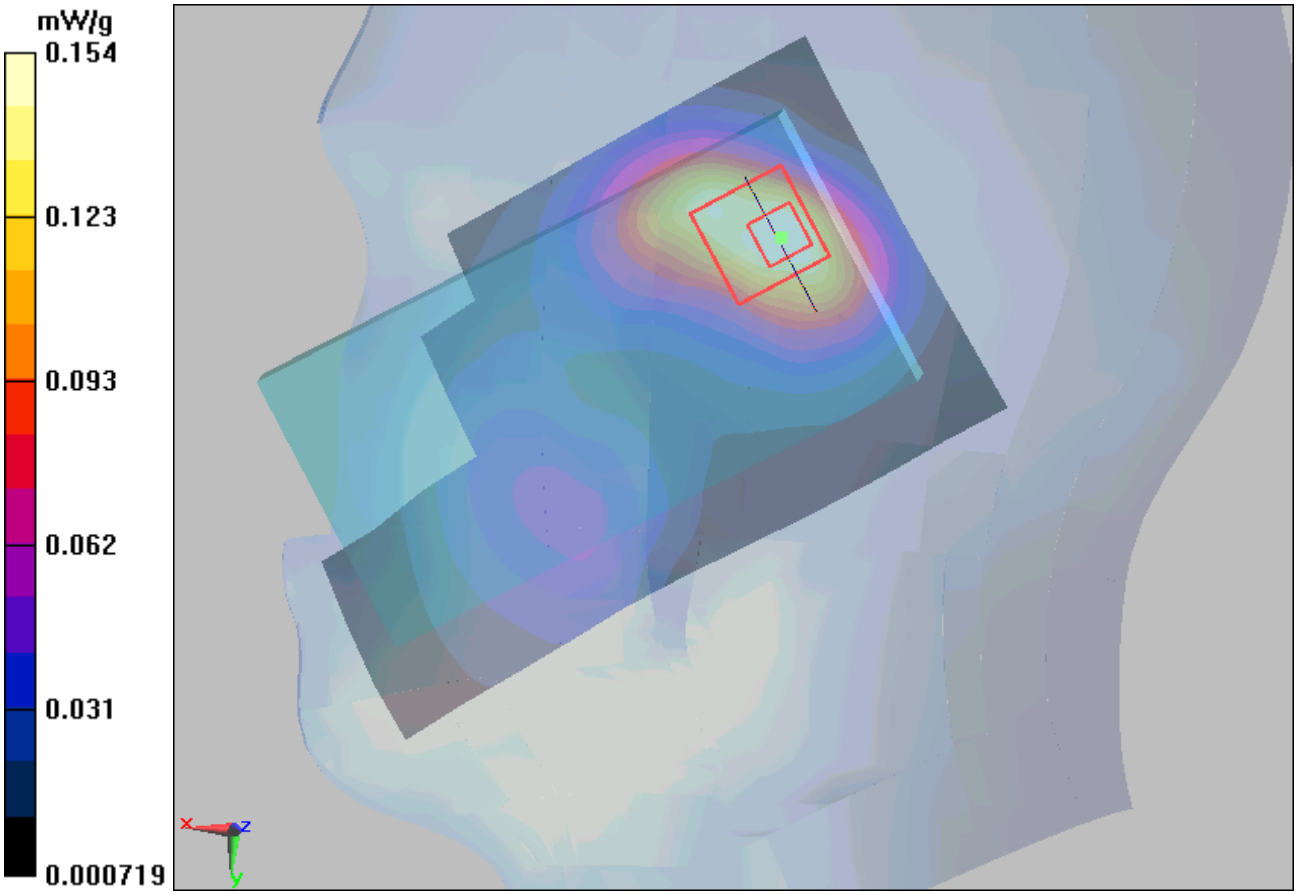


Figure 97 LTE Band 25 with 1RB Right Hand Tilt 15° Channel 26365

LTE Band 25 with 1RB Right Cheek Middle (10MHz, Battery 2, Power=19dBm)

Date/Time: 2/24/2013 4:55:43 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.215 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.89 V/m; Power Drift = 0.048 dB
Peak SAR (extrapolated) = 0.325 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.137 mW/g
Maximum value of SAR (measured) = 0.220 mW/g

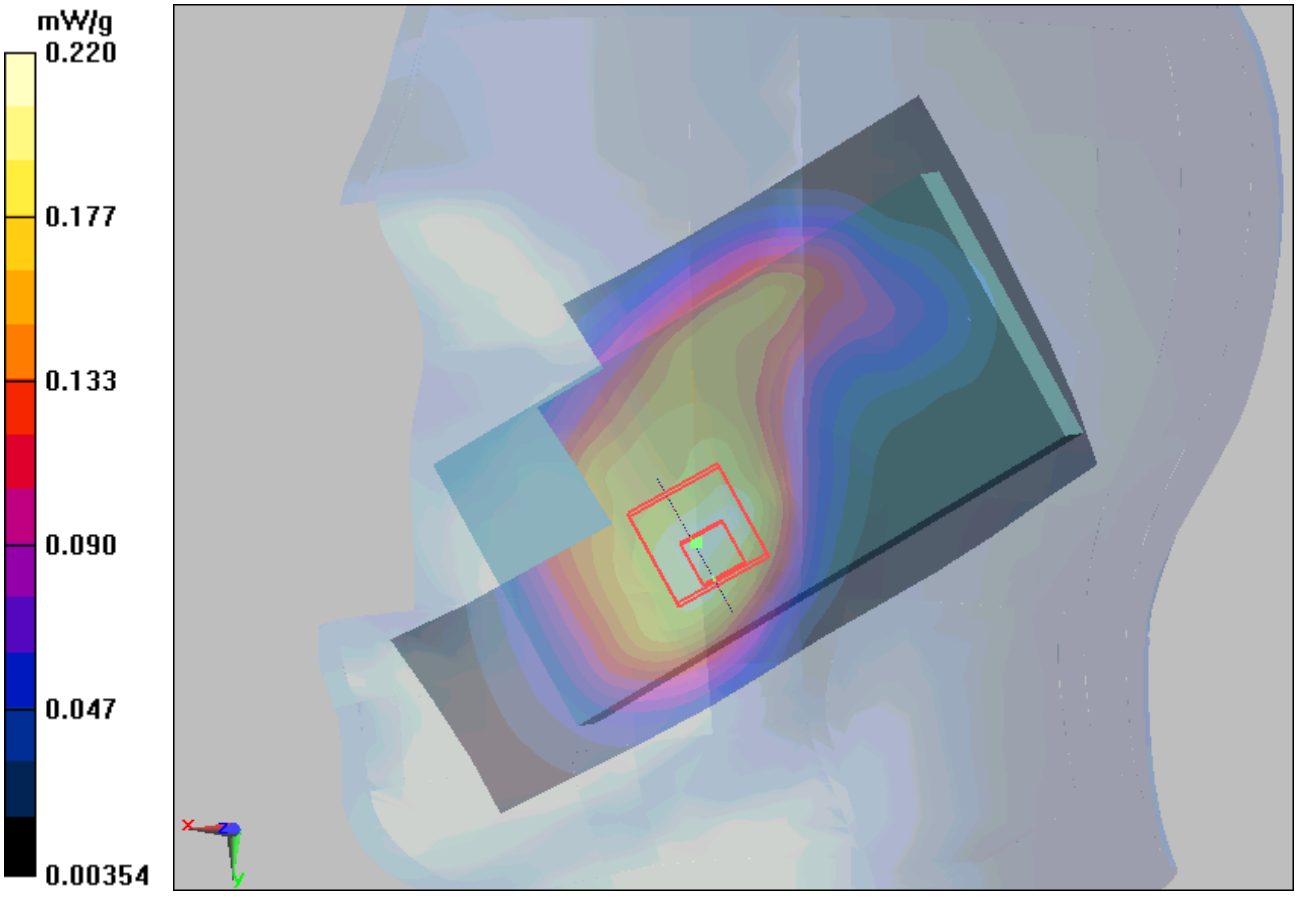


Figure 98 LTE Band 25 with 1RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 1RB Back Side Low (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/25/2013 5:12:04 PM

Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012

Electronics: DAE4 Sn1317; Calibrated: 1/25/2013

Sensor-Surface: 4mm (Mechanical Surface Detection)

Phantom: SAM2; Type: SAM; Serial: TP-1524

Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front side Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.279 mW/g

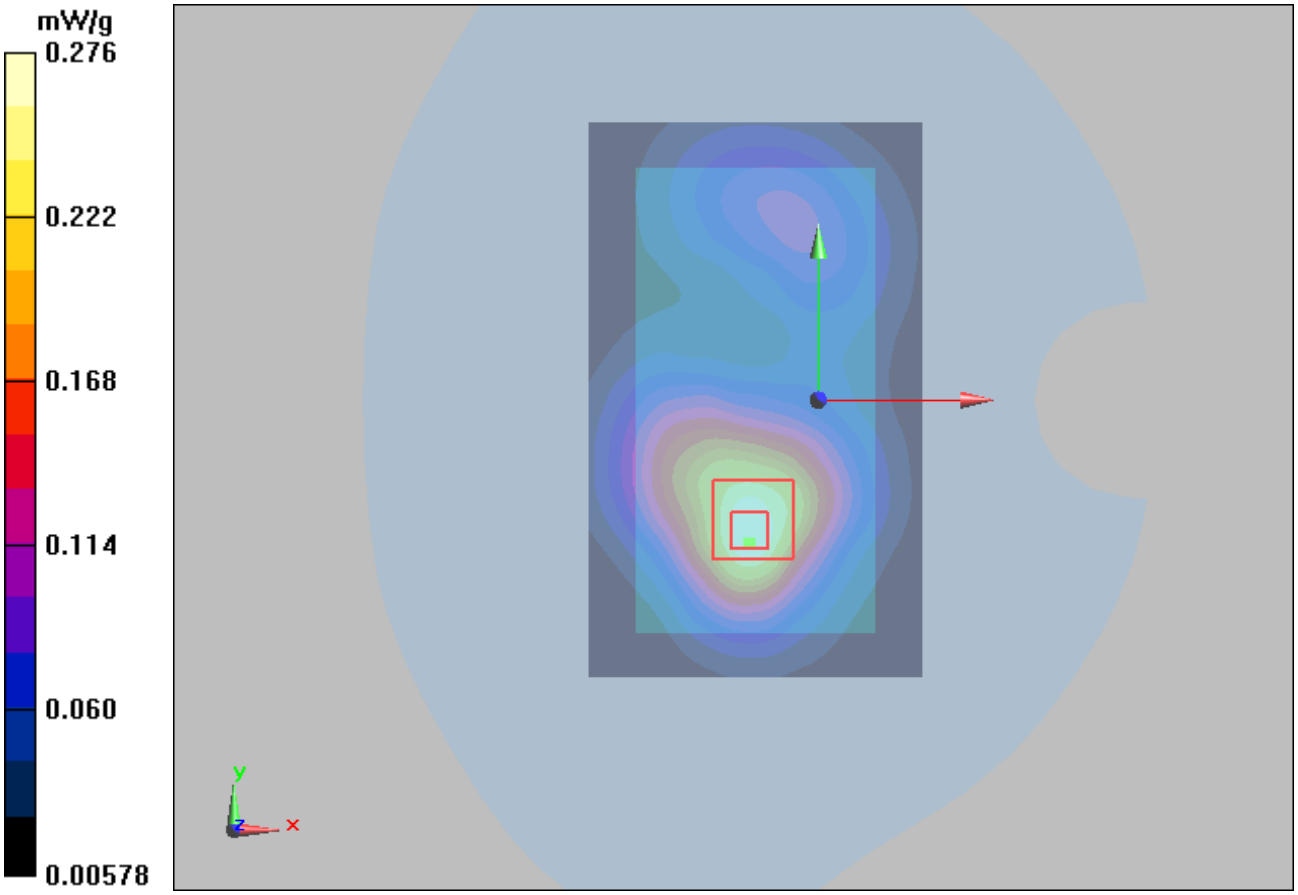
Front side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.96 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 0.397 W/kg

SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.159 mW/g

Maximum value of SAR (measured) = 0.276 mW/g



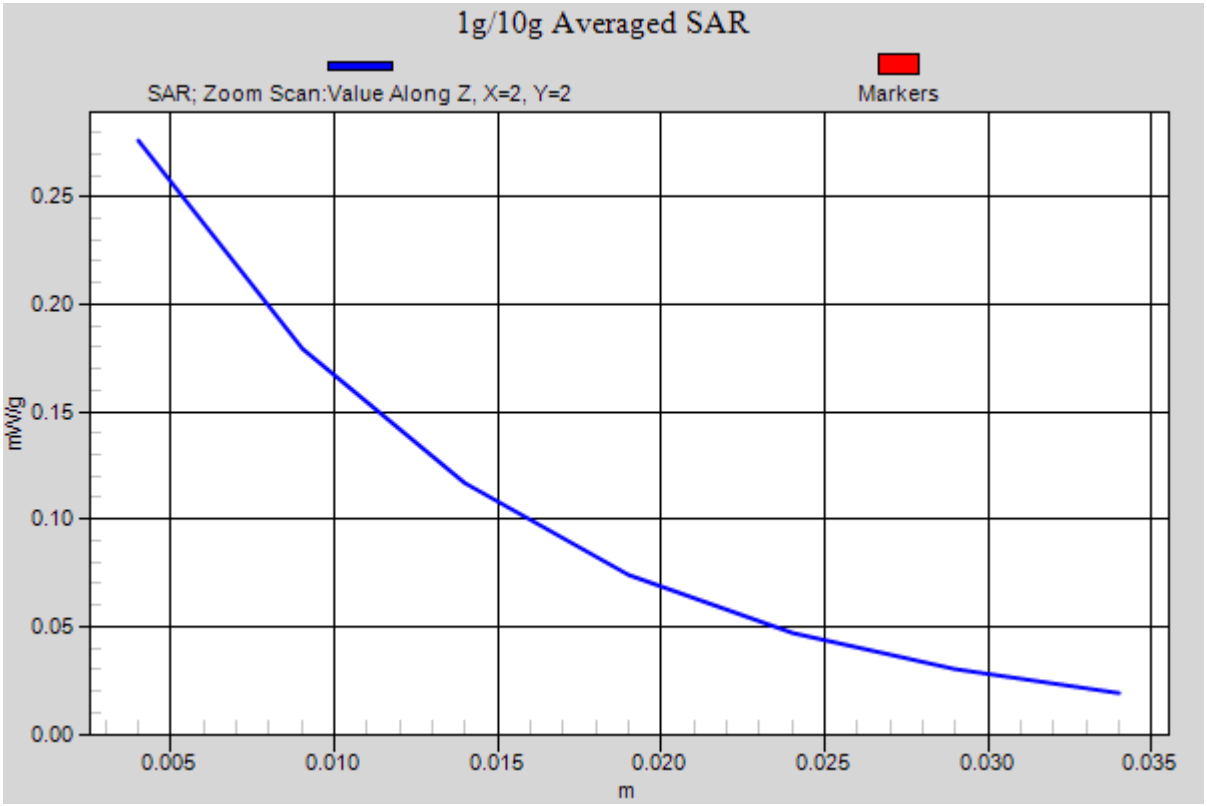


Figure 99 Body, LTE Band 25 with 1RB Back Side Channel 26090

LTE Band 25 with 1RB Front Side Low (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/25/2013 6:05:14 PM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Low(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.254 mW/g

Back side Low(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.9 V/m; Power Drift = -0.078 dB
Peak SAR (extrapolated) = 0.347 W/kg
SAR(1 g) = 0.226 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.244 mW/g

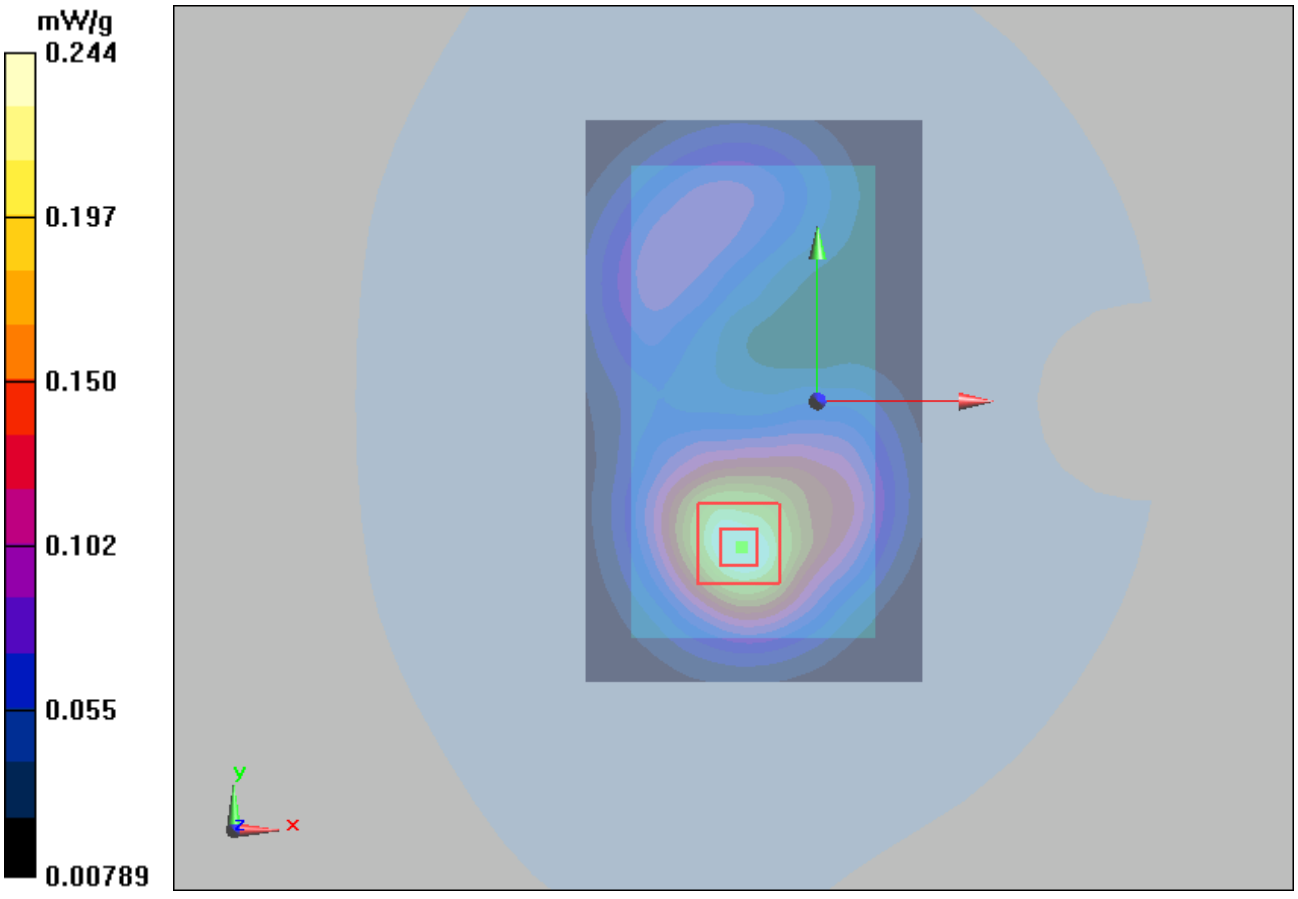


Figure 100 Body, LTE Band 25 with 1RB Front Side Channel 26090

LTE Band 25 with 1RB Back Side Low (10MHz, Battery 2, Power=19dBm)

Date/Time: 2/25/2013 5:30:23 PM
Communication System: LTE; Frequency: 1855 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1855 MHz; σ = 1.48 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Low/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.278 mW/g

Back side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.72 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.158 mW/g
Maximum value of SAR (measured) = 0.274 mW/g

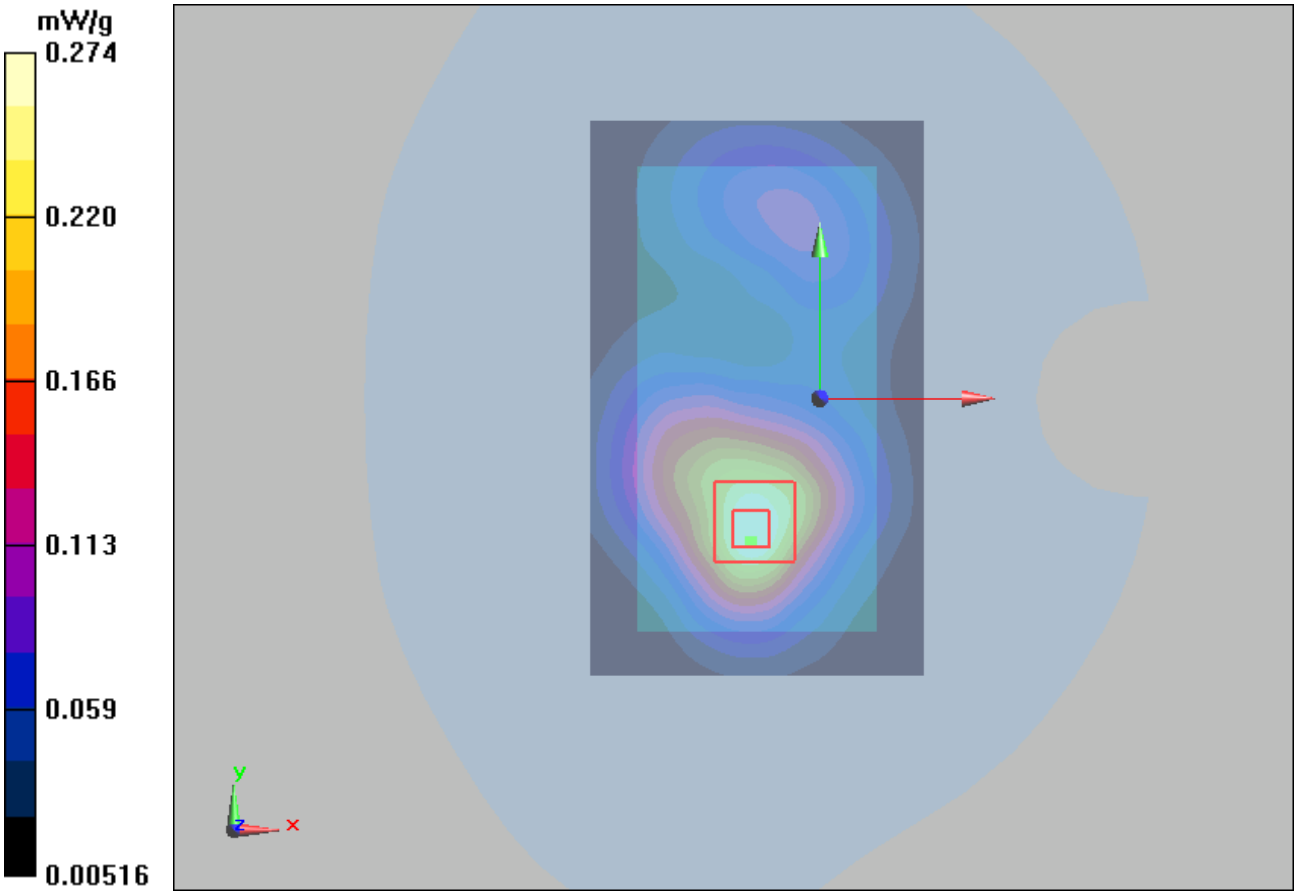


Figure 101 Body, LTE Band 25 with 1RB Back Side Channel 26090

LTE Band 25 with 50%RB Left Cheek Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 6:12:26 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.209 mW/g

Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.75 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 0.294 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.122 mW/g
Maximum value of SAR (measured) = 0.208 mW/g

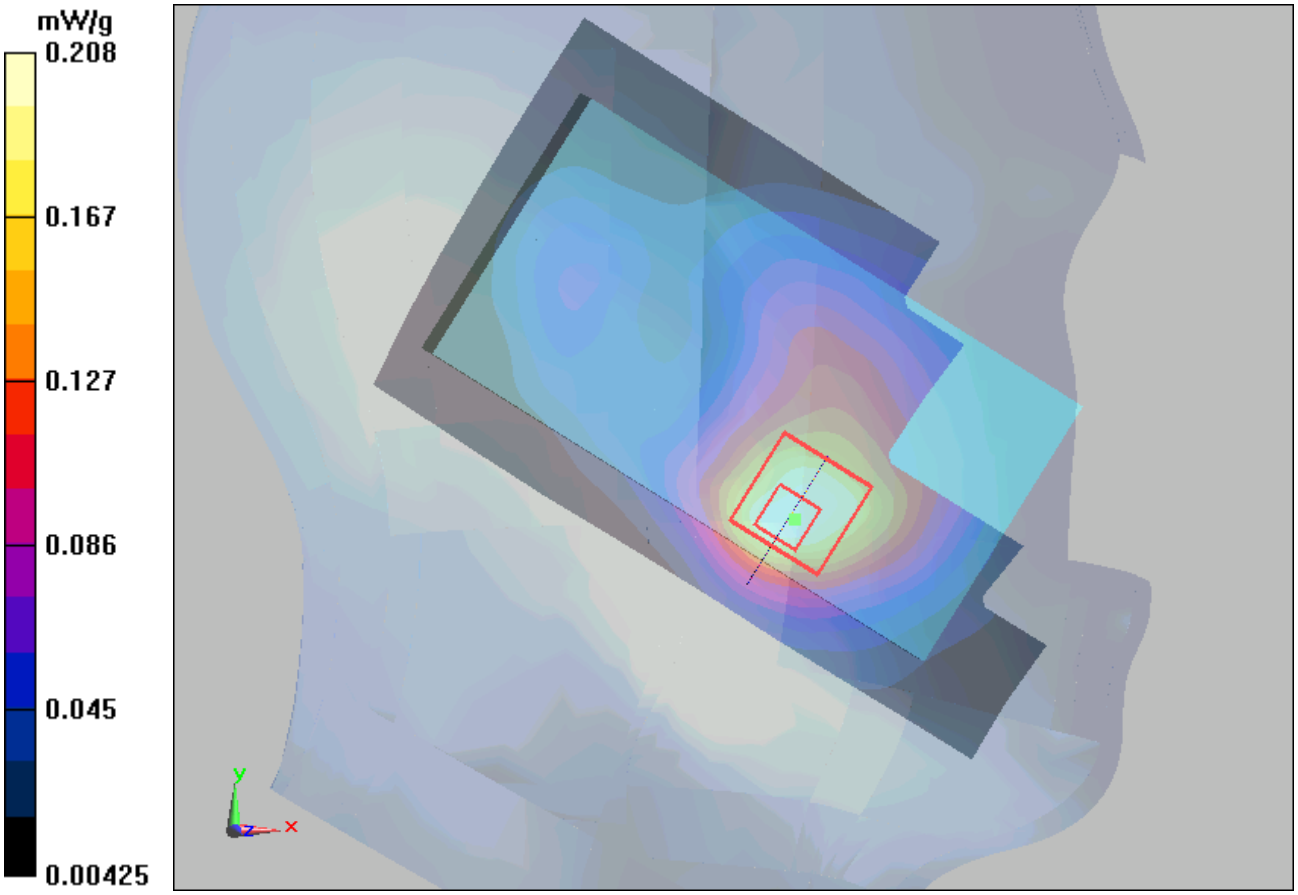


Figure 102 LTE Band 25 with 50%**RB Left Hand Touch Cheek Channel 26365**

LTE Band 25 with 50%RB Left Tilt Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 6:29:21 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.127 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.07 V/m; Power Drift = 0.144 dB
Peak SAR (extrapolated) = 0.195 W/kg
SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.068 mW/g
Maximum value of SAR (measured) = 0.126 mW/g

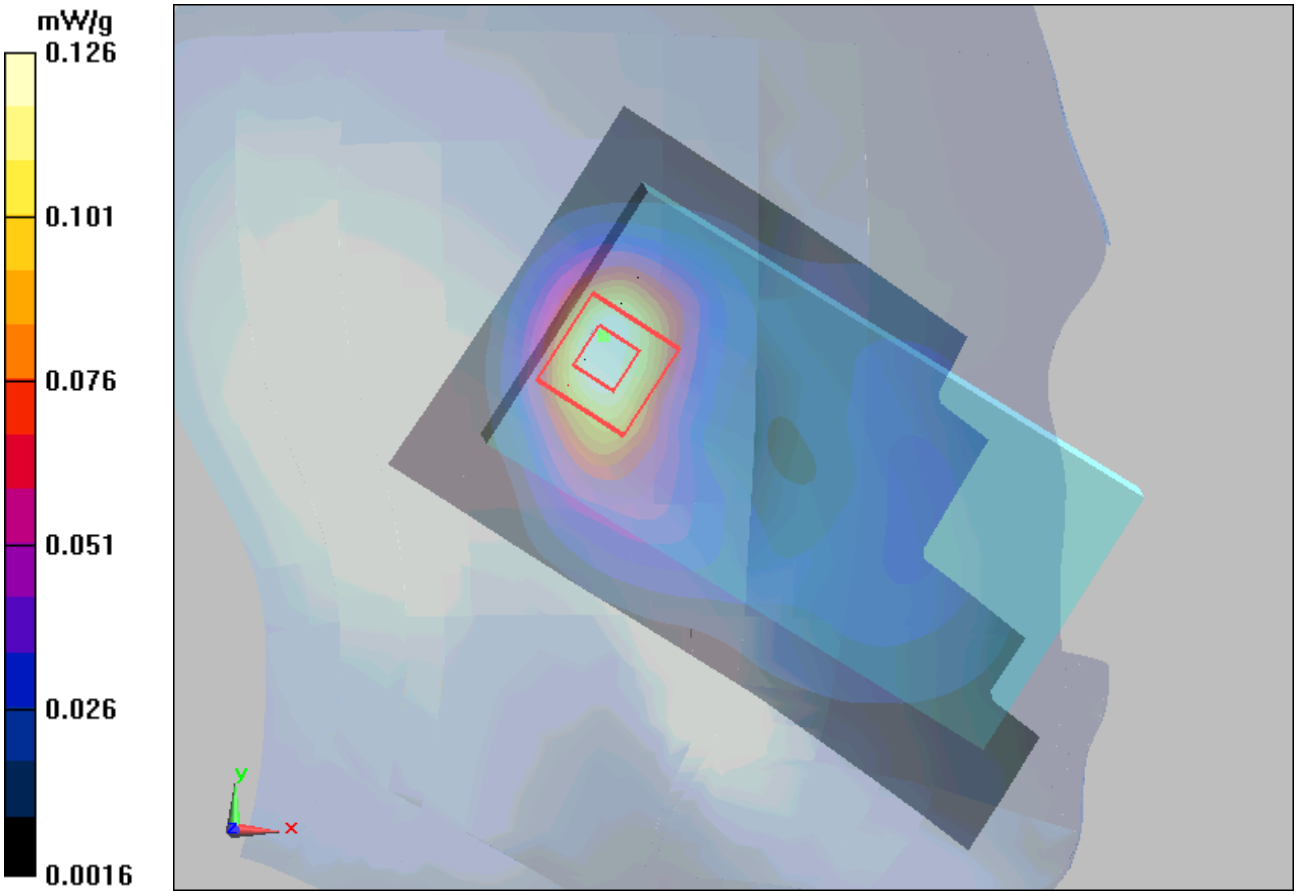


Figure 103 LTE Band 25 with 50%RB Left Hand Tilt 15° Channel 26365

LTE Band 25 with 50%RB Right Cheek Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 5:25:57 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

CheeK Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.180 mW/g

CheeK Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.14 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.113 mW/g
Maximum value of SAR (measured) = 0.184 mW/g

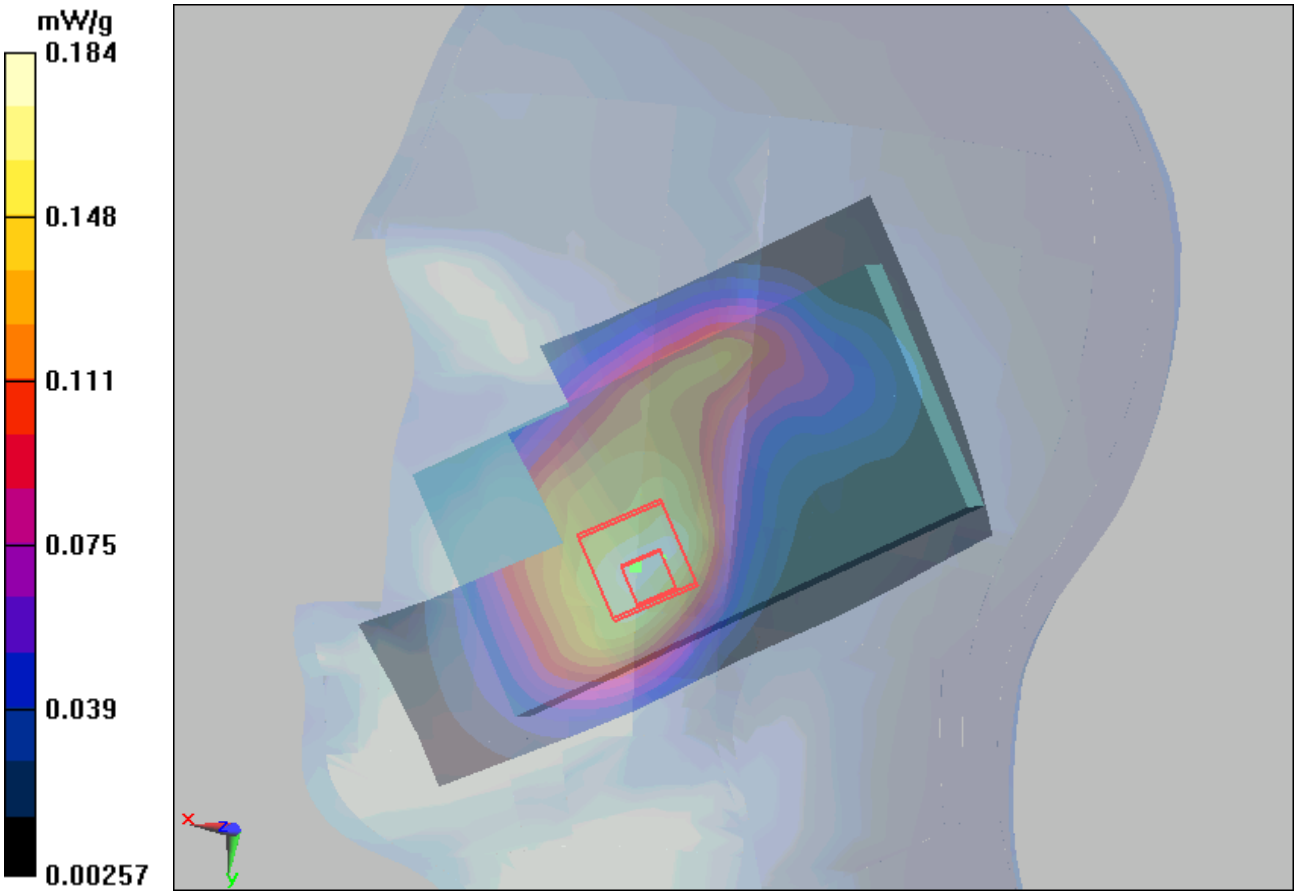


Figure 104 LTE Band 25 with 50%RB Right Hand Touch Cheek Channel 26365

LTE Band 25 with 50%RB Right Tilt Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/24/2013 5:57:14 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.39 mho/m; ε_r = 40.1; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.69, 4.69, 4.69); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.122 mW/g

Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.59 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.068 mW/g
Maximum value of SAR (measured) = 0.121 mW/g

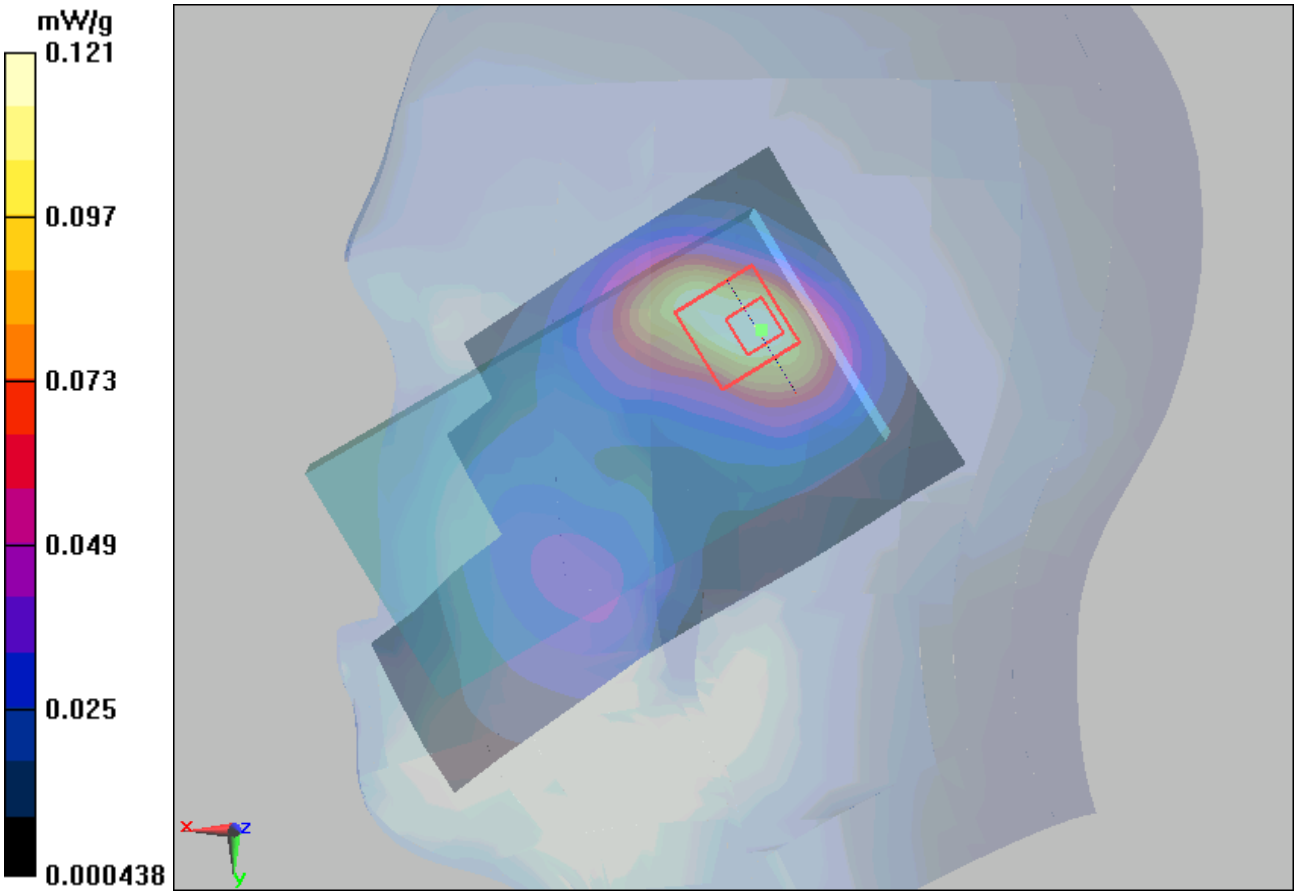


Figure 105 LTE Band 25 with 50%RB Right Hand Tilt 15° Channel 26365

LTE Band 25 with 50%RB Back Side Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/25/2013 6:57:16 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.210 mW/g

Back side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.3 V/m; Power Drift = 0.120 dB
Peak SAR (extrapolated) = 0.303 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.119 mW/g
Maximum value of SAR (measured) = 0.208 mW/g

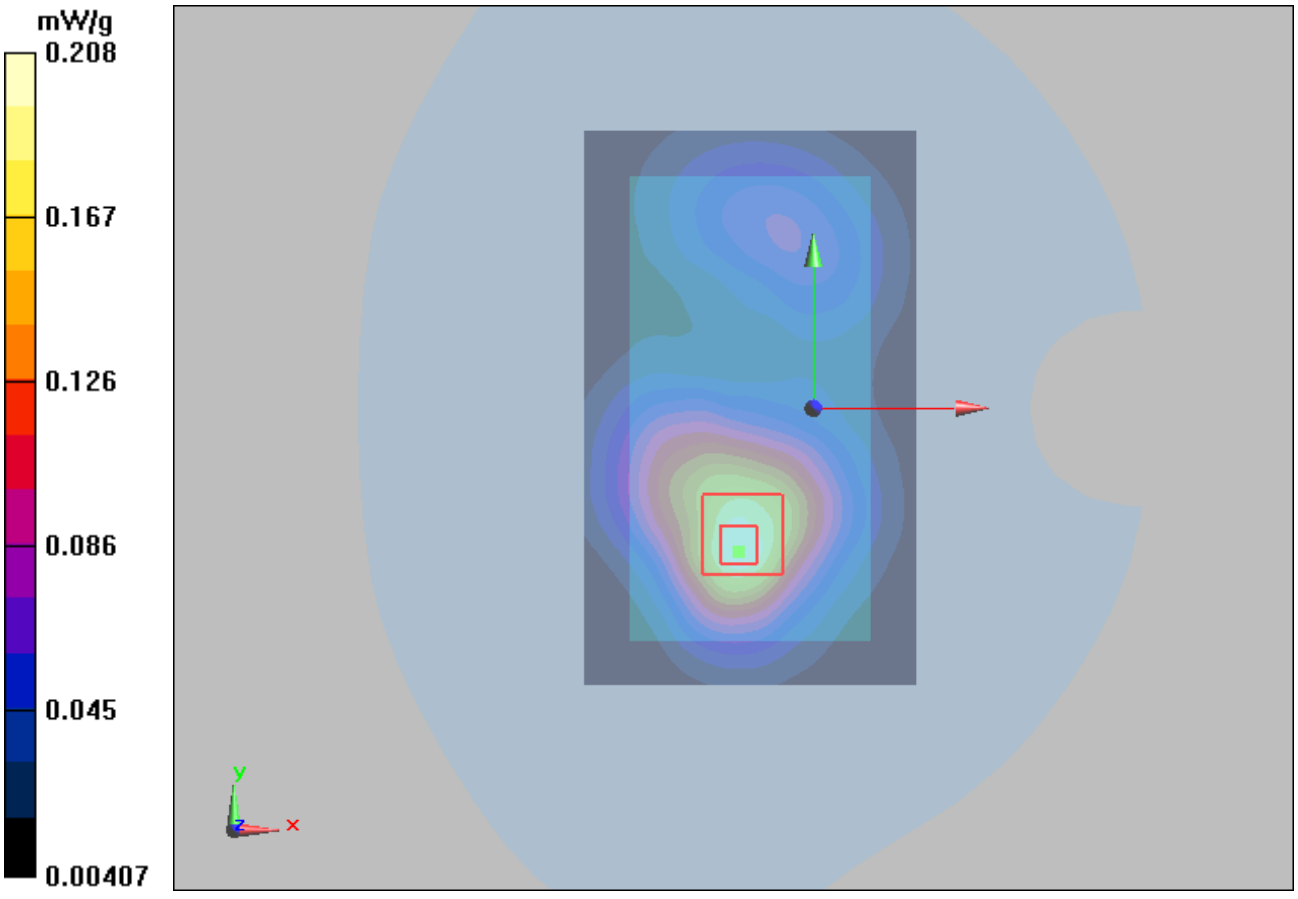


Figure 106 Body, LTE Band 25 with 50%RB Back Side Channel 26365

LTE Band 25 with 50%RB Front Side Middle (10MHz, Battery 1, Power=19dBm)

Date/Time: 2/25/2013 6:38:16 PM
Communication System: LTE; Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.51 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.36, 4.36, 4.36); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back side Middle(Low end)/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.182 mW/g

Back side Middle(Low end)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.28 V/m; Power Drift = 0.124 dB
Peak SAR (extrapolated) = 0.261 W/kg
SAR(1 g) = 0.168 mW/g; SAR(10 g) = 0.105 mW/g
Maximum value of SAR (measured) = 0.182 mW/g

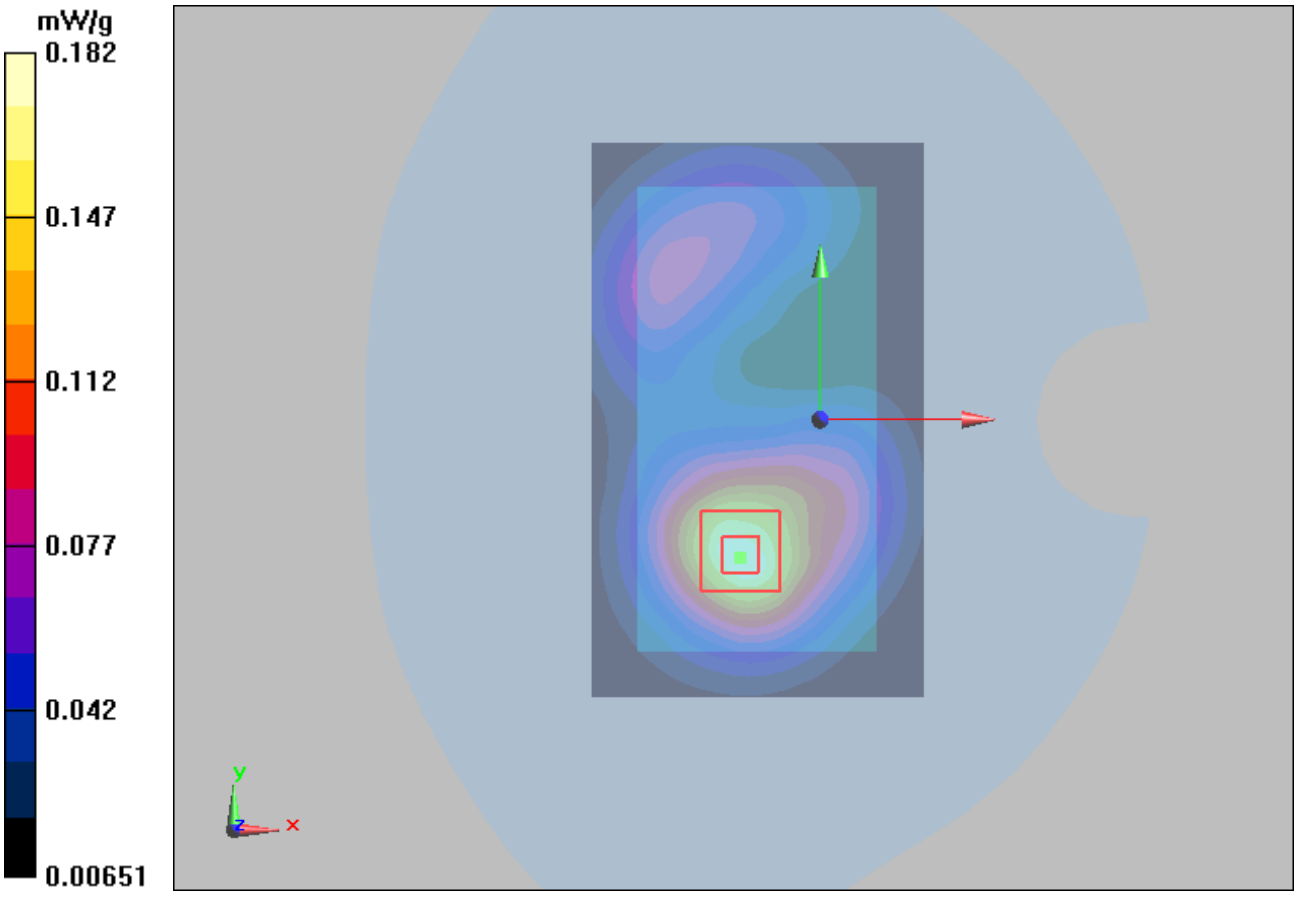


Figure 107 Body, LTE Band 25 with 50%RB Front Side Channel 26365

802.11b Left Cheek Middle (Battery 1)

Date/Time: 2/16/2013 5:13:56 PM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.025 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.93 V/m; Power Drift = -0.009 dB
Peak SAR (extrapolated) = 0.038 W/kg
SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00707 mW/g
Maximum value of SAR (measured) = 0.024 mW/g

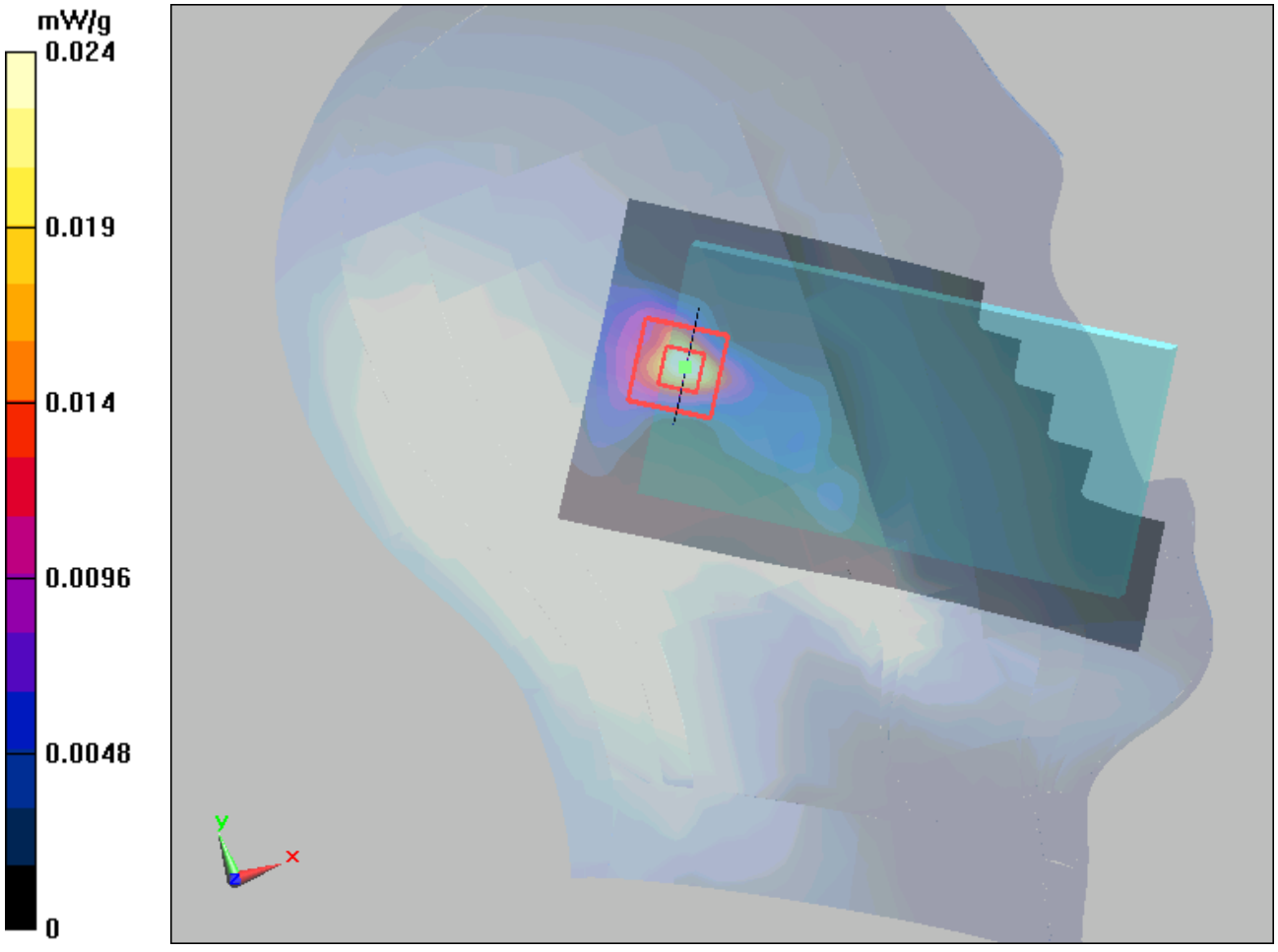


Figure 108 Left Hand Touch Cheek 802.11b Channel 6

802.11b Left Tilt Middle (Battery 1)

Date/Time: 2/16/2013 5:40:46 PM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.020 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.18 V/m; Power Drift = 0.080 dB
Peak SAR (extrapolated) = 0.028 W/kg
SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00677 mW/g
Maximum value of SAR (measured) = 0.018 mW/g

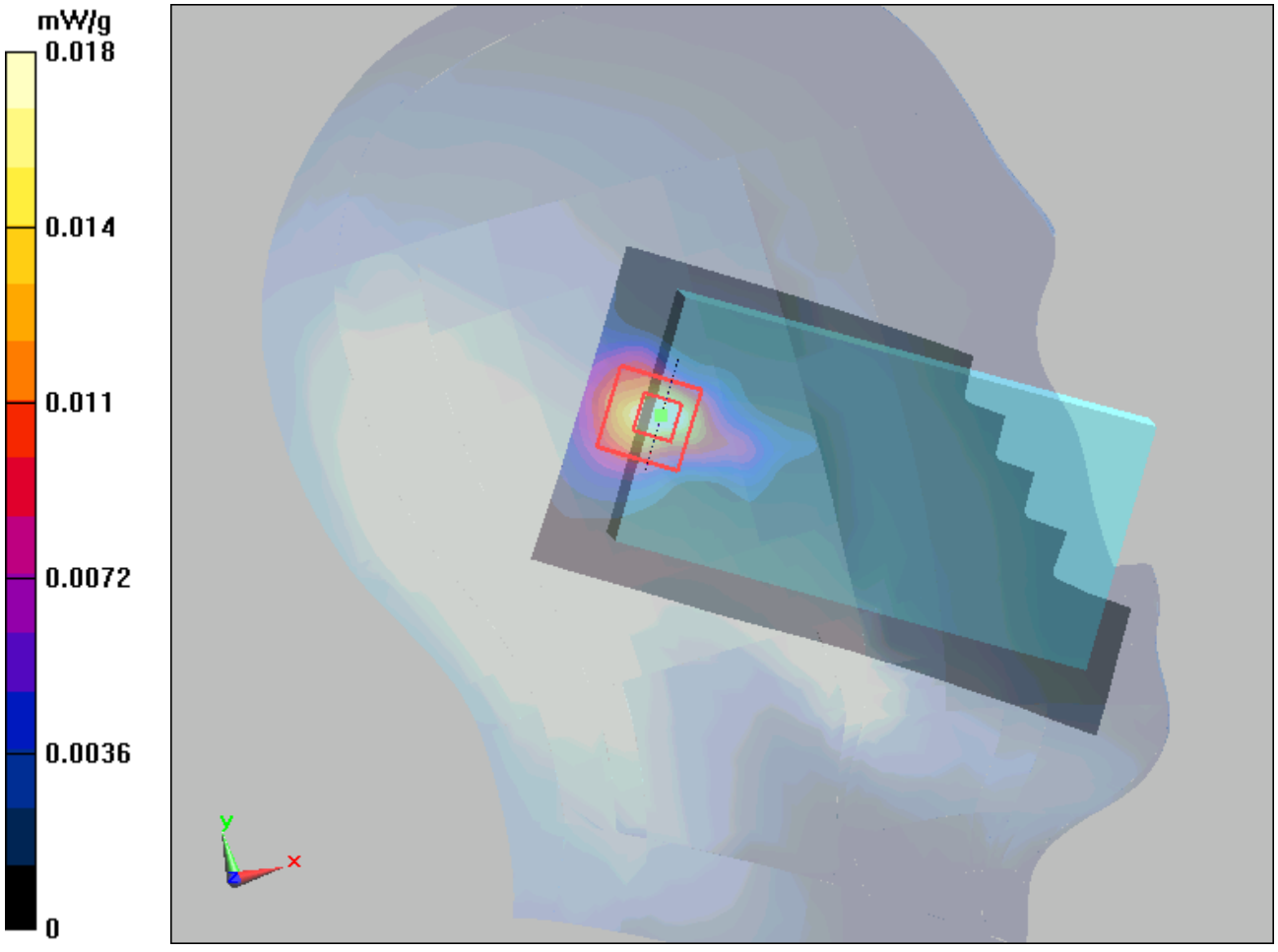


Figure 109 Left Hand Tilt 15° 802.11b Channel 6

802.11b Right Cheek Middle (Battery 1)

Date/Time: 2/16/2013 1:31:41 PM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Middle/Area Scan (81x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.087 mW/g

Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.62 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 0.180 W/kg
SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.035 mW/g
Maximum value of SAR (measured) = 0.085 mW/g

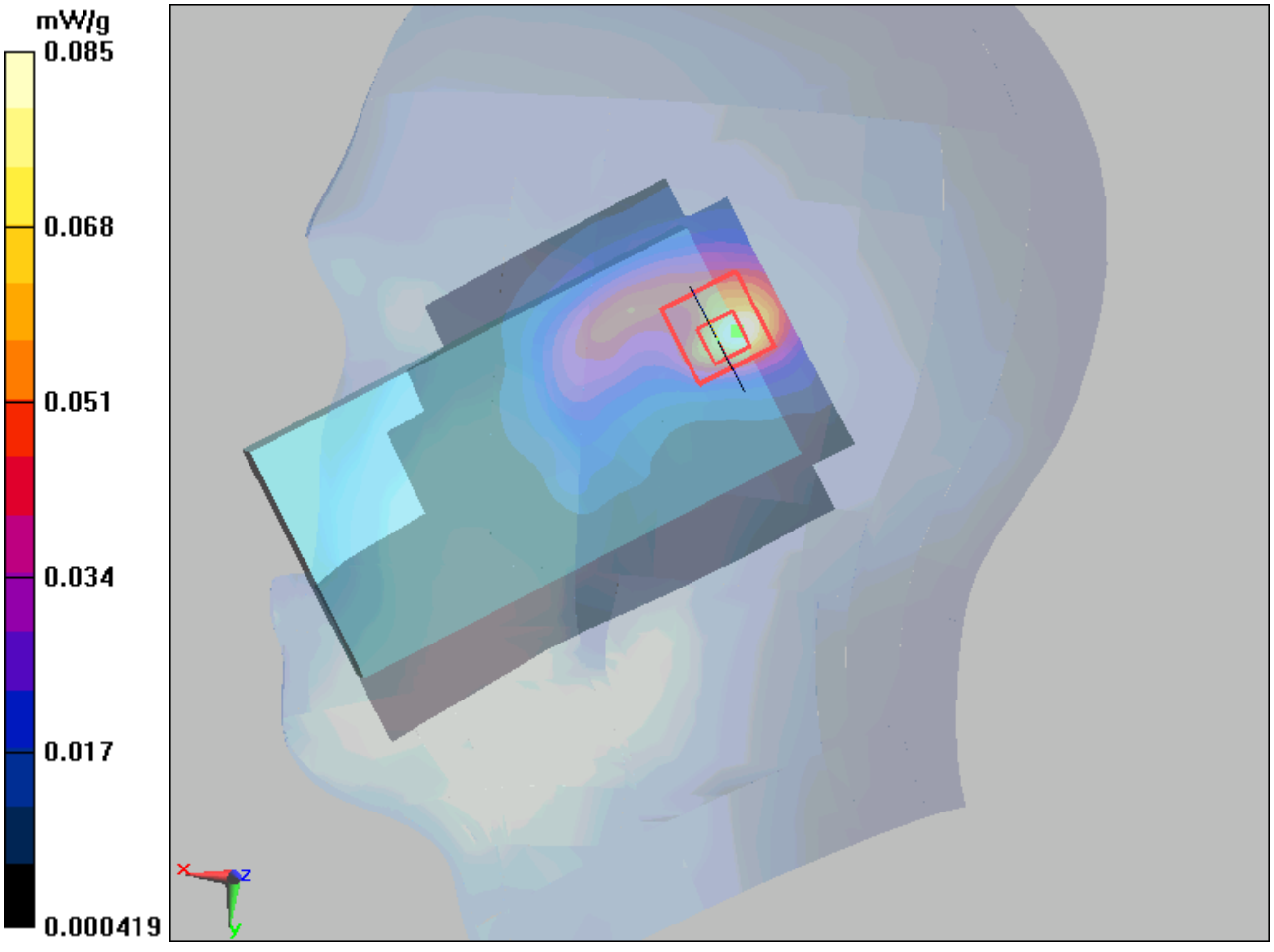


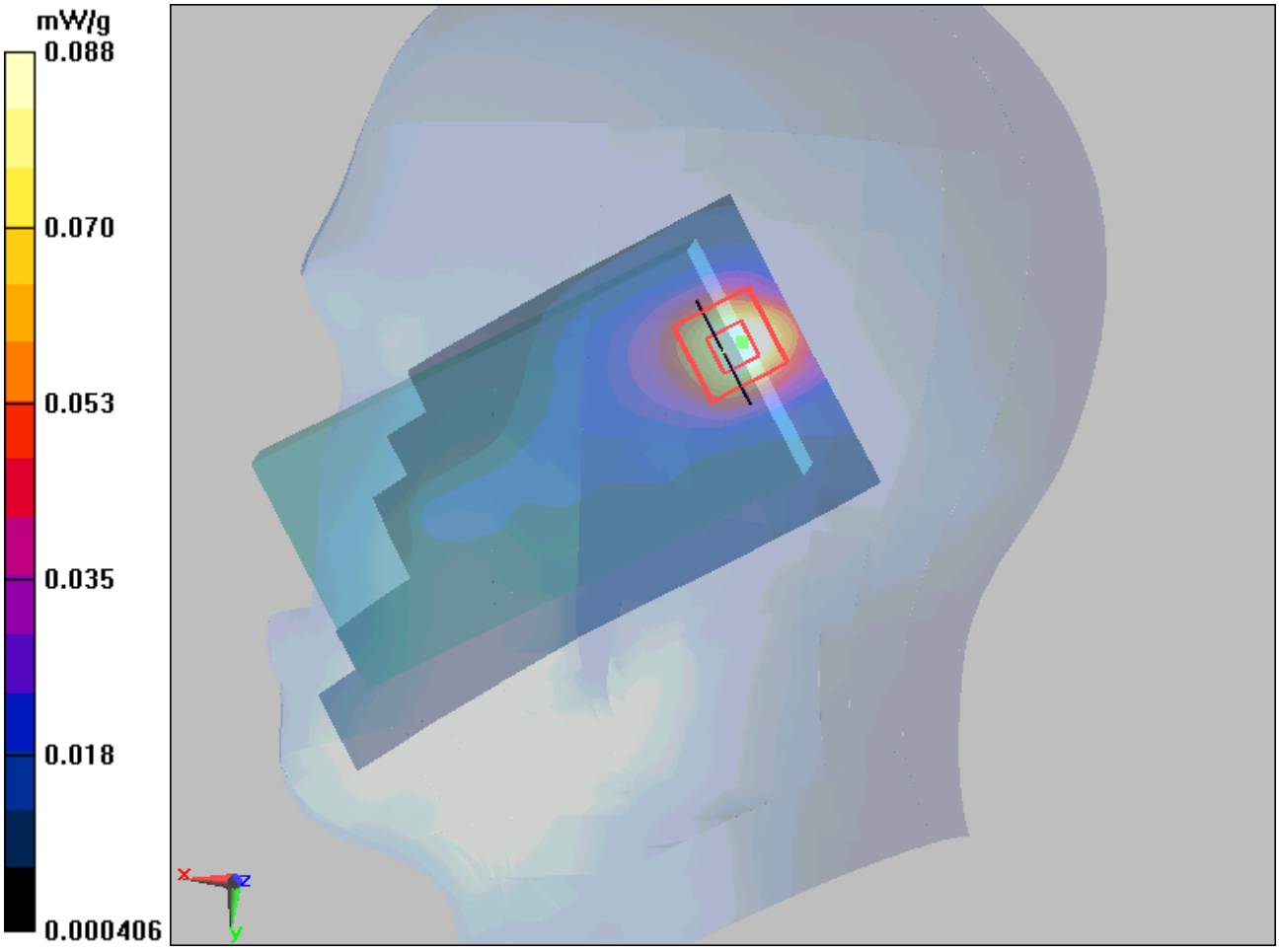
Figure 110 Right Hand Touch Cheek 802.11b Channel 6

802.11b Right Tilt Middle (Battery 1)

Date/Time: 2/16/2013 2:25:54 PM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.100 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.79 V/m; Power Drift = 0.0079 dB
Peak SAR (extrapolated) = 0.195 W/kg
SAR(1 g) = 0.080 mW/g; SAR(10 g) = 0.036 mW/g
Maximum value of SAR (measured) = 0.088 mW/g



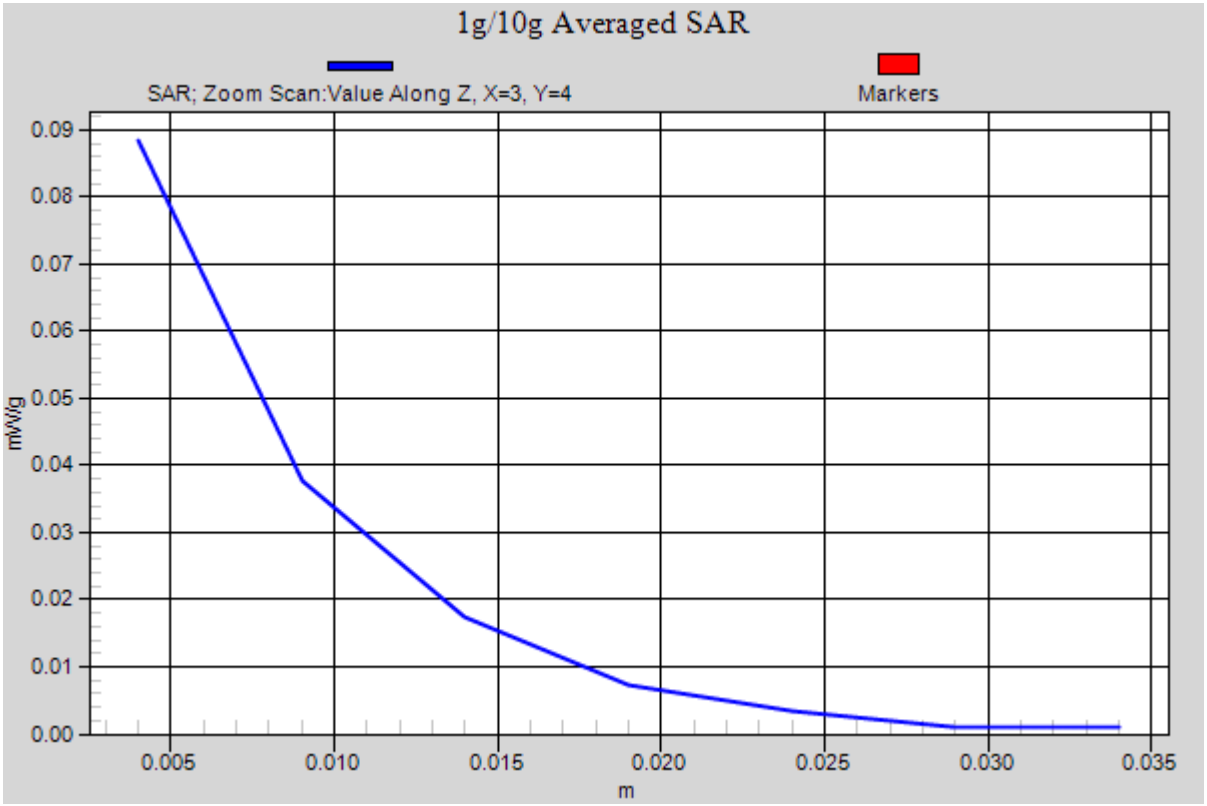


Figure 111 Right Hand Tilt 15° 802.11b Channel 6

802.11b Right Tilt Middle (Battery 2)

Date/Time: 2/16/2013 2:25:54 PM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.100 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.79 V/m; Power Drift = -0.079 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.036 mW/g
Maximum value of SAR (measured) = 0.088 mW/g

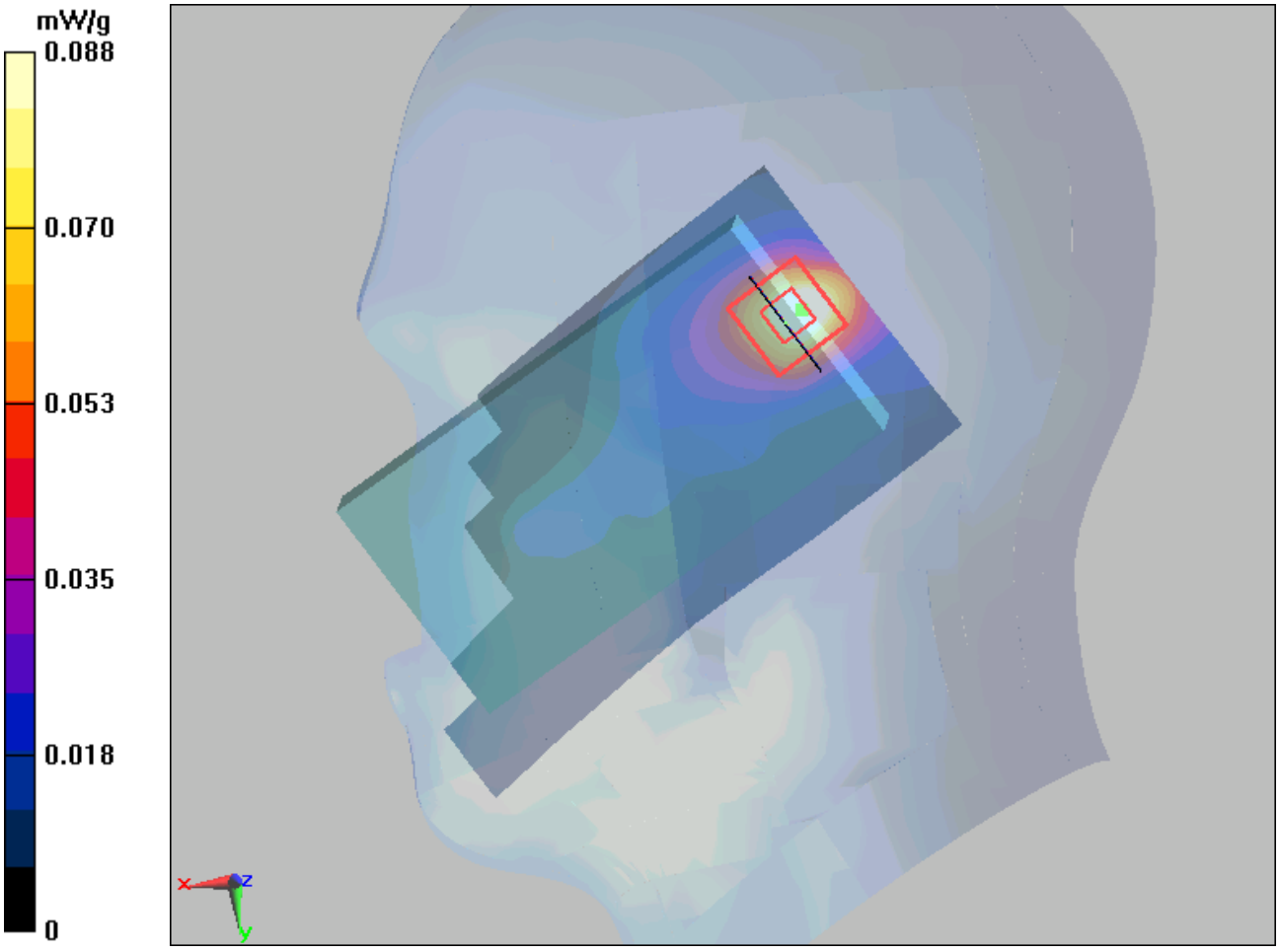


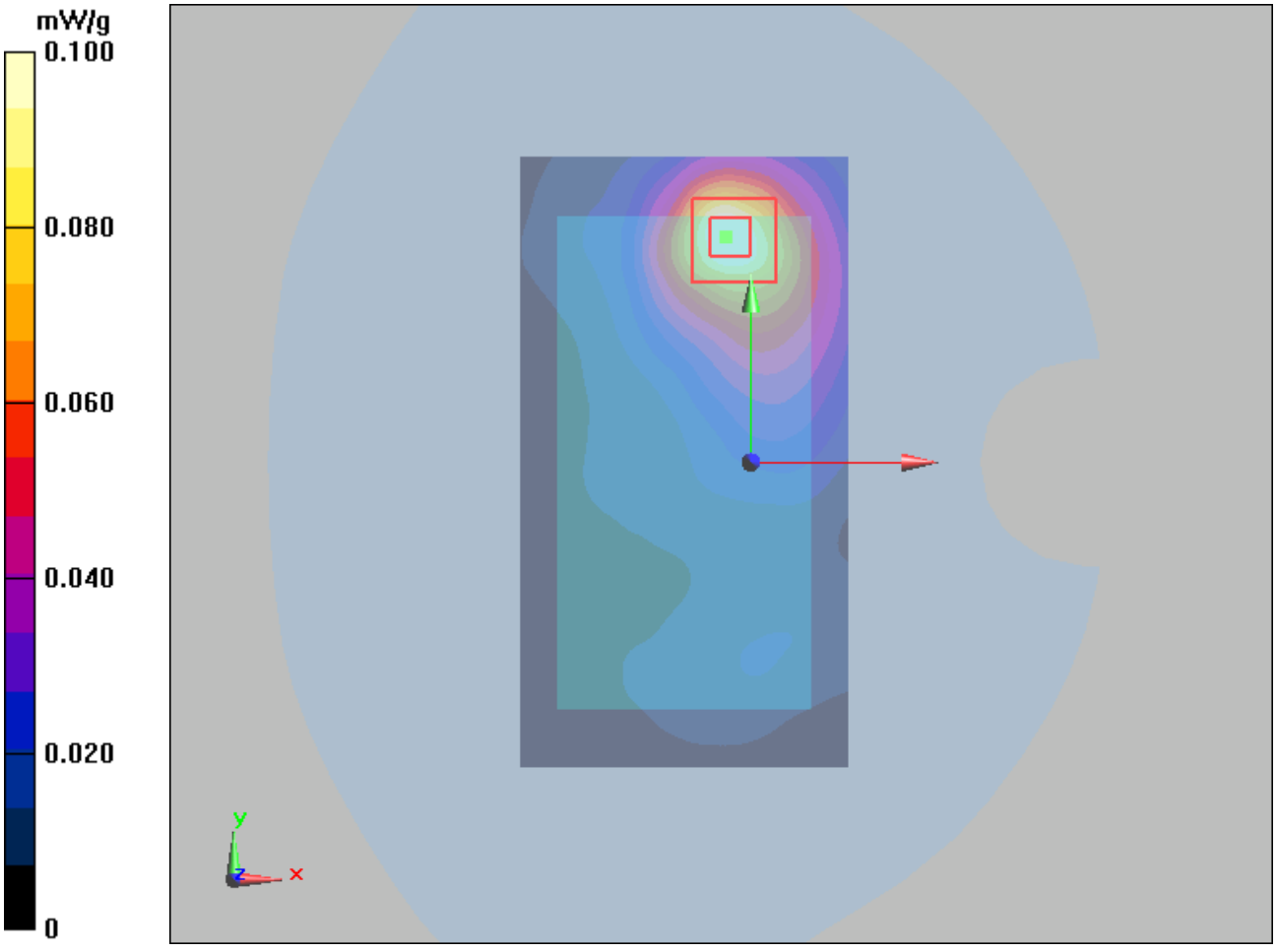
Figure 112 Right Hand Tilt 15° 802.11b Channel 6

802.11b Back Side Middle (Battery 1)

Date/Time: 2/22/2013 8:31:50 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.88 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back Side Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.104 mW/g

Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.61 V/m; Power Drift = 0.073 dB
Peak SAR (extrapolated) = 0.191 W/kg
SAR(1 g) = 0.093 mW/g; SAR(10 g) = 0.047 mW/g
Maximum value of SAR (measured) = 0.100 mW/g



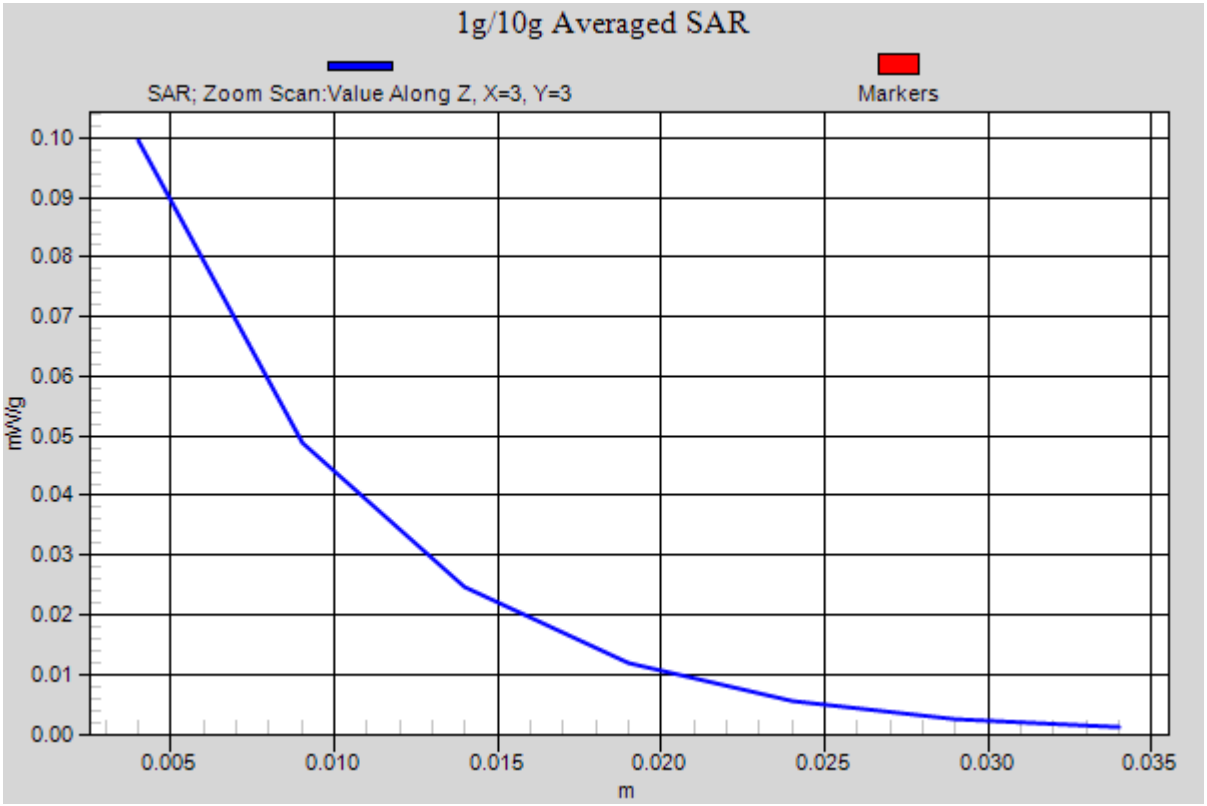


Figure 113 Body, Back Side, 802.11b Channel 6

802.11b Front Side Middle (Battery 1)

Date/Time: 2/22/2013 9:27:20 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.88 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Front Side Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.020 mW/g

Front Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.85 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 0.036 W/kg
SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.00825 mW/g
Maximum value of SAR (measured) = 0.019 mW/g

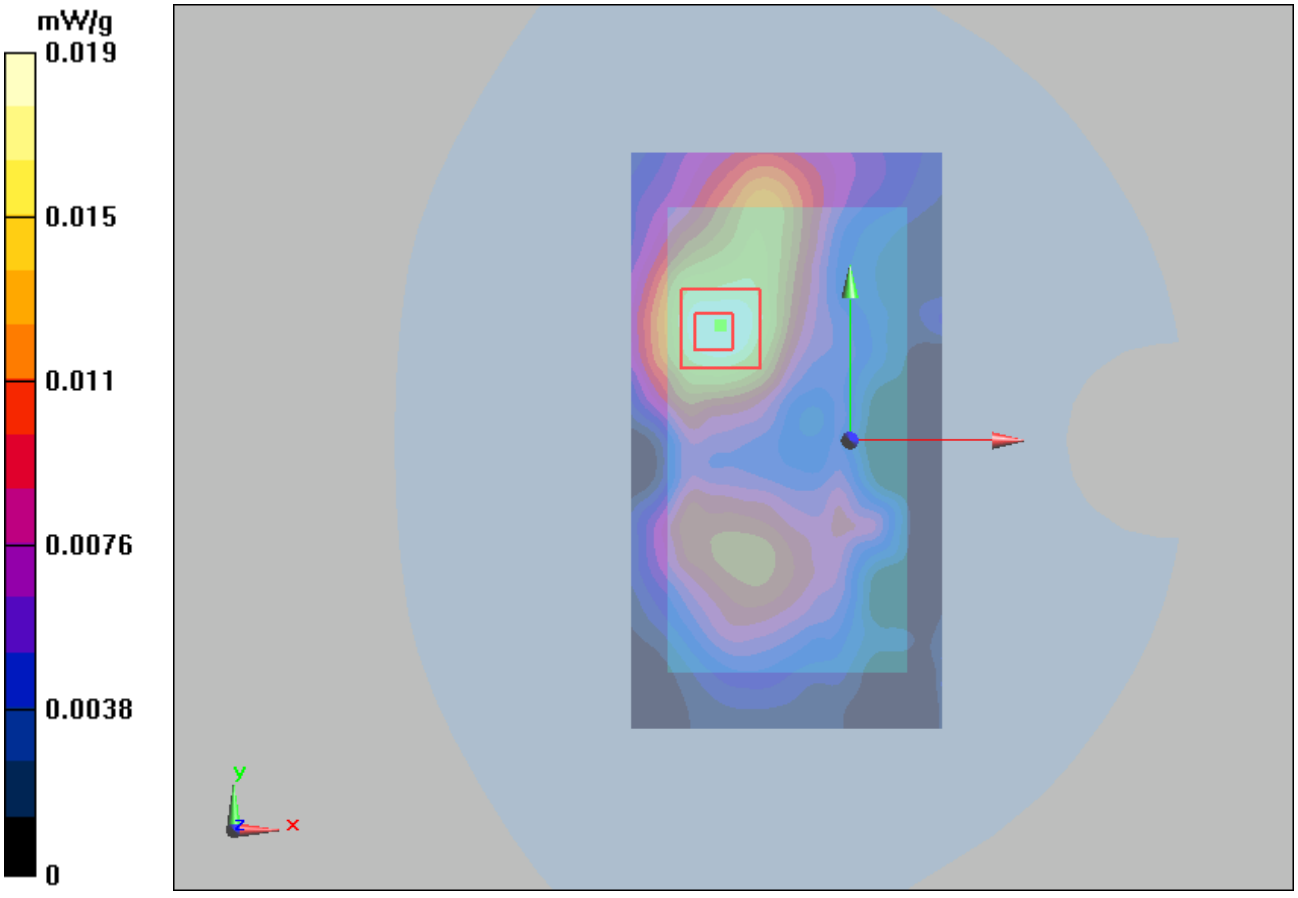


Figure 114 Body, Front Side, 802.11b Channel 6

802.11b Back Side Middle (Battery 2)

Date/Time: 2/22/2013 8:59:26 AM
Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.88 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Back Side Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.098 mW/g

Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.52 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 0.184 W/kg
SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.045 mW/g
Maximum value of SAR (measured) = 0.096 mW/g

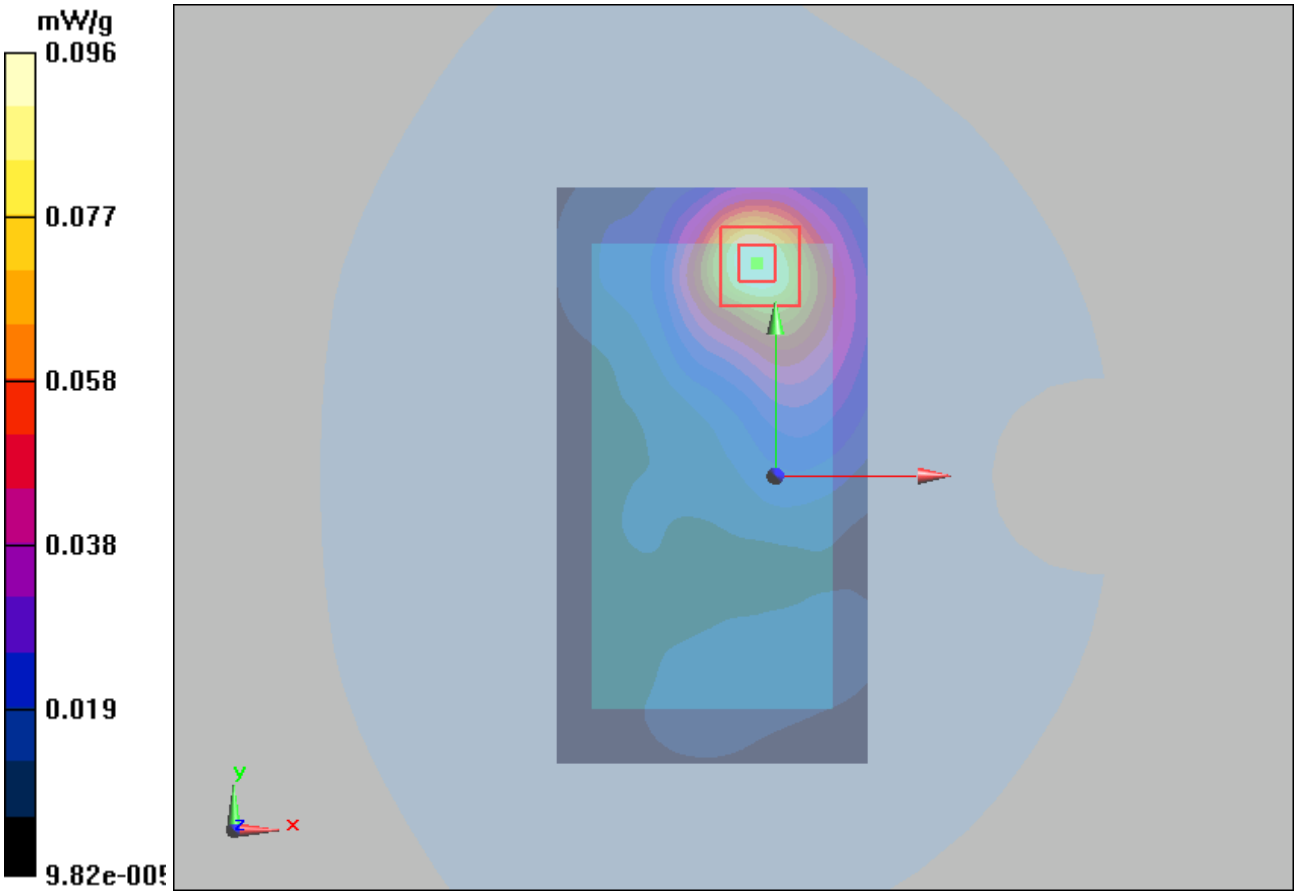


Figure 115 Body, Back Side, 802.11b Channel 6

BT Left Cheek Low (Battery 1)

Date/Time: 2/16/2013 9:14:56 PM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY4 Configuration:
Probe: ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.00351 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.09 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.00781 W/kg
SAR(1 g) = 0.00137 mW/g; SAR(10 g) = 0.000534 mW/g
Maximum value of SAR (measured) = 0.00363 mW/g

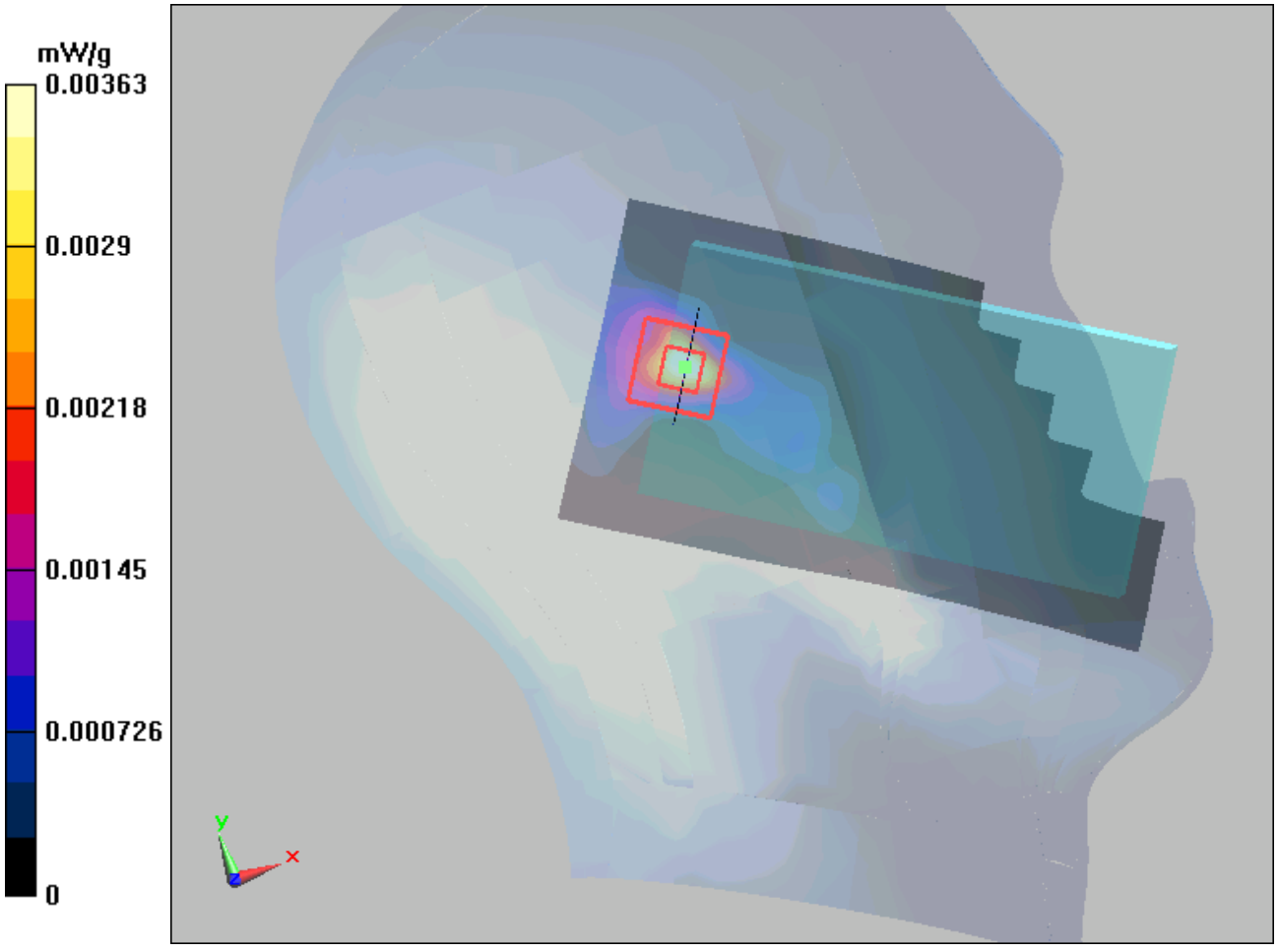


Figure 116 Left Hand Touch Cheek BT Channel 0

BT Left Tilt Low (Battery 1)

Date/Time: 3/12/2013 1:44:03 AM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Middle/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.00346 mW/g

Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.801 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 0.00631 W/kg
SAR(1 g) = 0.0006 mW/g; SAR(10 g) = 4.67e-005 mW/g
Maximum value of SAR (measured) = 0.00214 mW/g

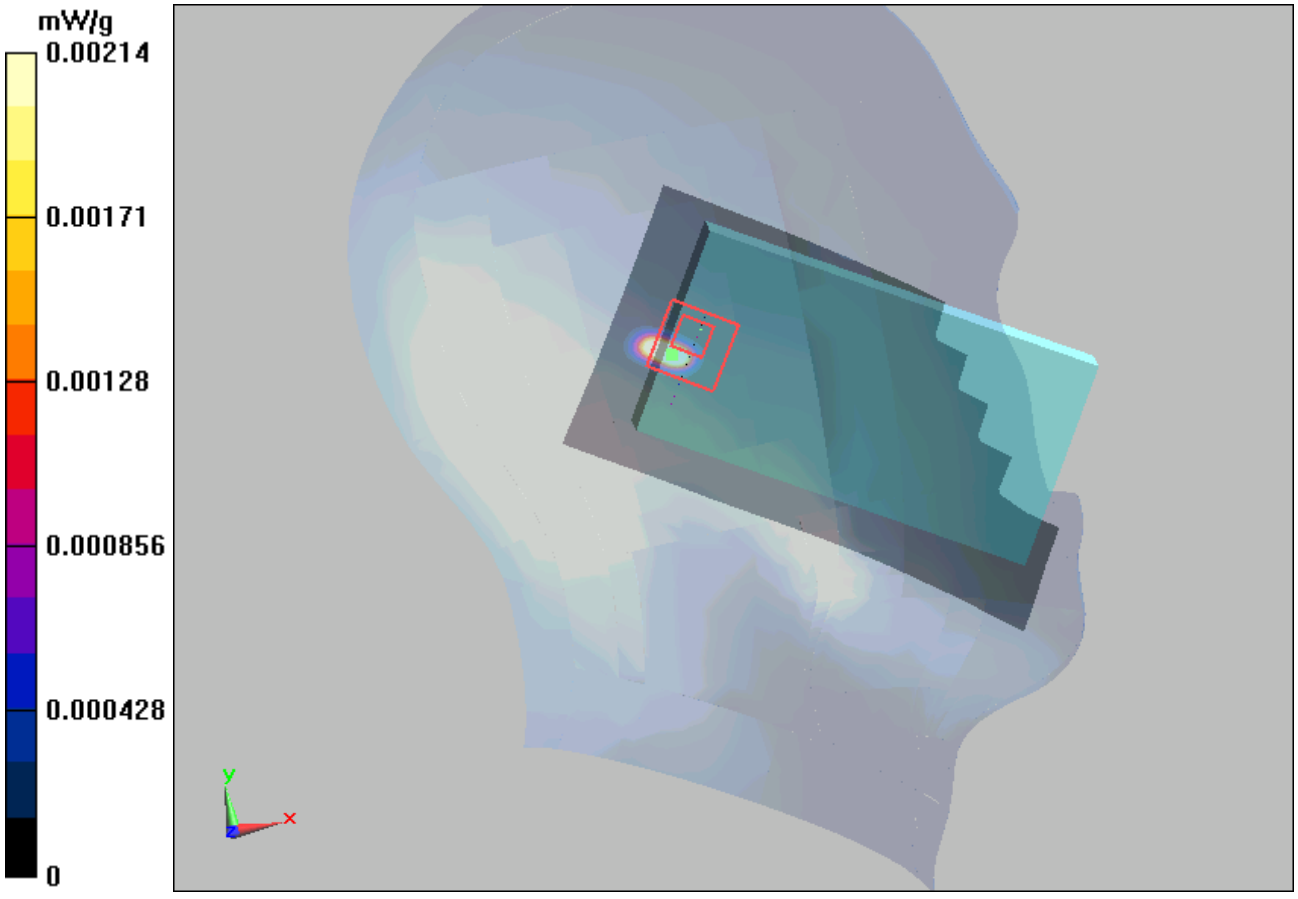


Figure 117 Left Hand Tilt 15° BT Channel 0

BT Right Cheek Low (Battery 1)

Date/Time: 3/12/2013 12:14:31 AM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Cheek Low/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.00385 mW/g

Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.906 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 0.00714 W/kg
SAR(1 g) = 0.00434 mW/g; SAR(10 g) = 0.00268 mW/g
Maximum value of SAR (measured) = 0.00565 mW/g

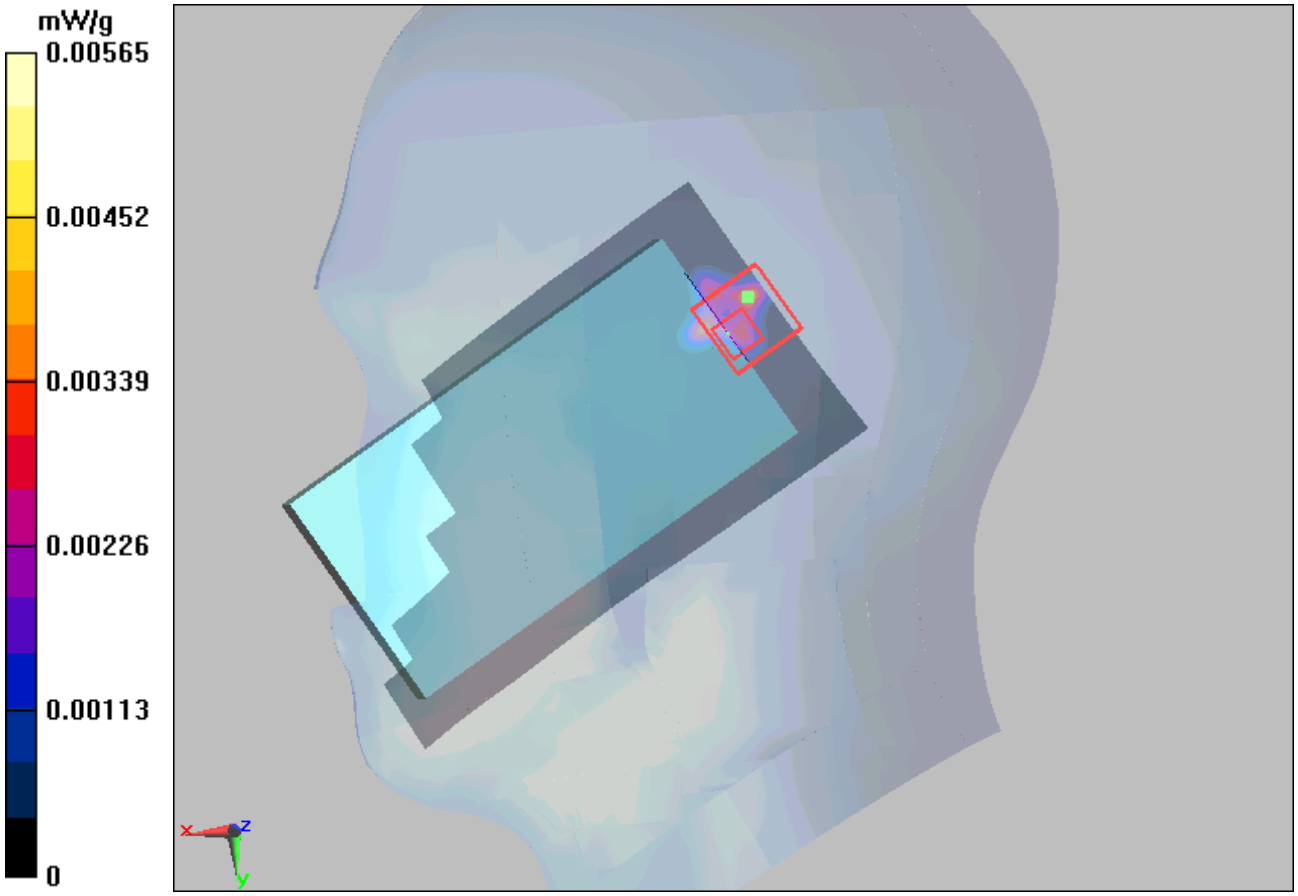


Figure 118 Right Hand Touch Cheek BT Channel 0

BT Right Tilt Low (Battery 1)

Date/Time: 3/12/2013 12:44:46 AM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.00624 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.2 V/m; Power Drift = 0.022 dB
Peak SAR (extrapolated) = 0.010 W/kg
SAR(1 g) = 0.00365 mW/g; SAR(10 g) = 0.00161 mW/g
Maximum value of SAR (measured) = 0.00491 mW/g

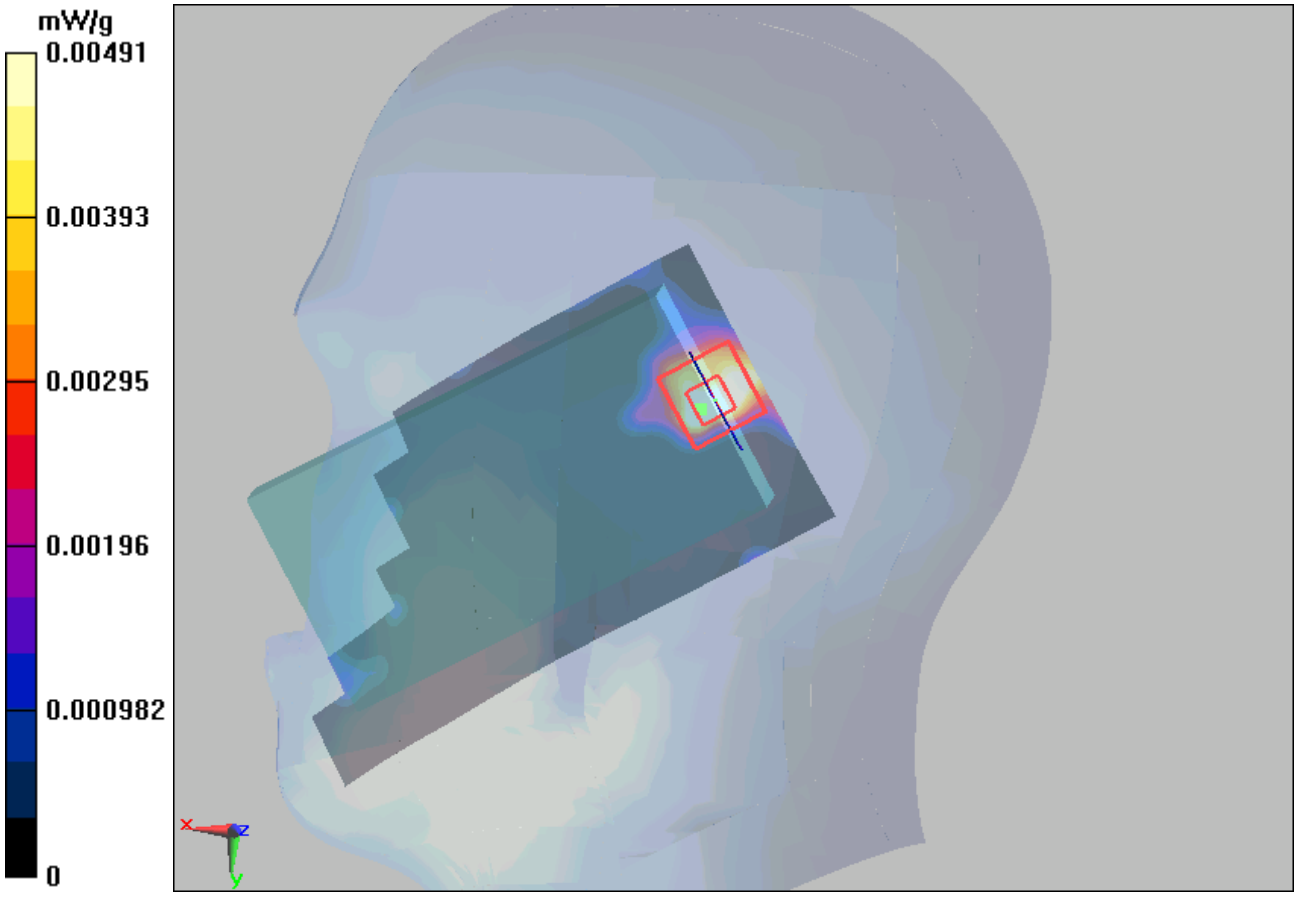


Figure 119 Right Hand Tilt 15° BT Channel 0

BT Right Tilt Low (Battery 2)

Date/Time: 3/12/2013 2:16:45 AM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Right Section
DASY5 Configuration:
ES3DV3 - SN3189; ConvF(4.14, 4.14, 4.14); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Tilt Low/Area Scan (71x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.00454 mW/g

Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.1 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 0.012 W/kg
SAR(1 g) = 0.00199 mW/g; SAR(10 g) = 0.000277 mW/g
Maximum value of SAR (measured) = 0.00341 mW/g

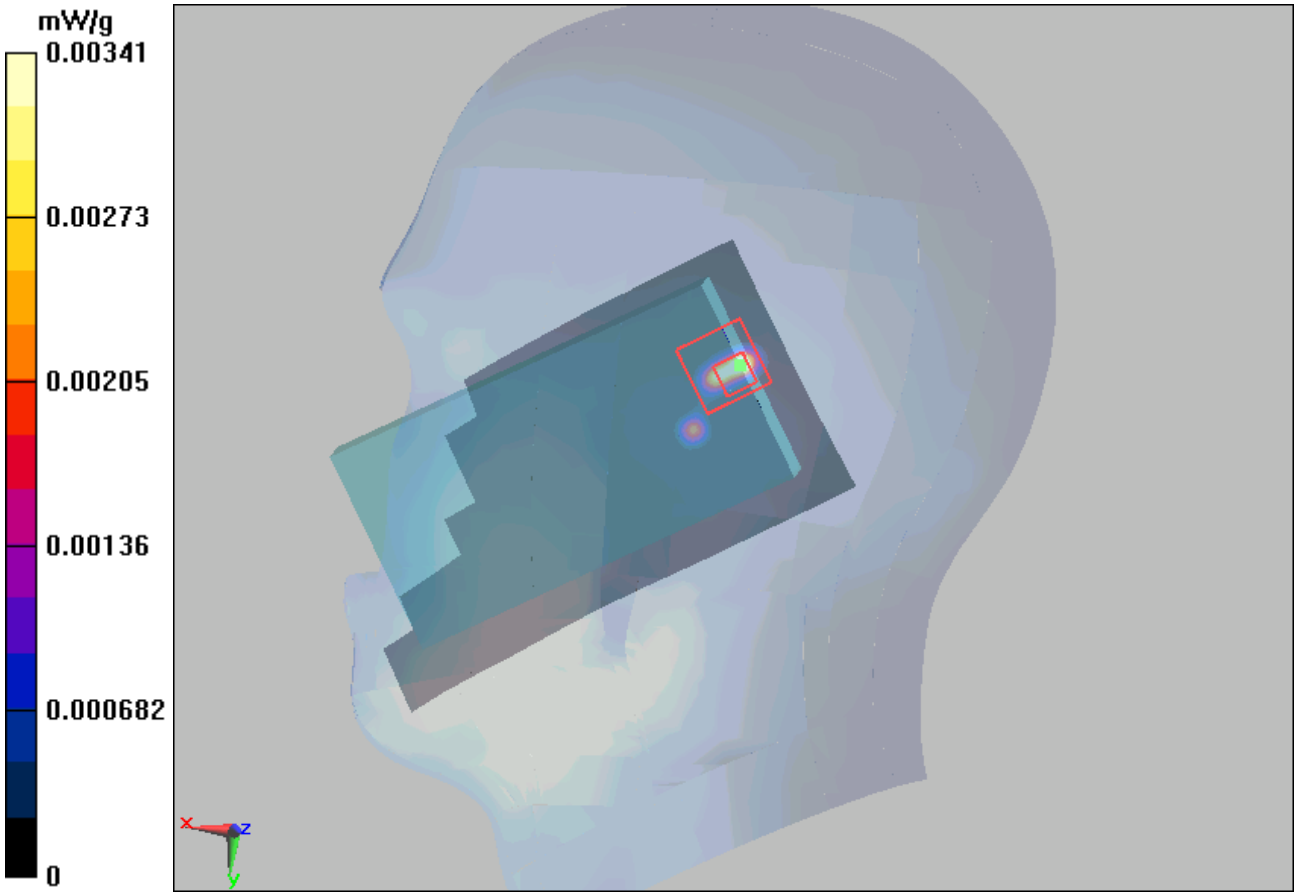


Figure 120 Right Hand Tilt 15° BT Channel 0

BT Back Side Low (Battery 1)

Date/Time: 3/11/2013 9:16:15 PM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.83 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground Low/Area Scan (81x121x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.036 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.19 V/m; Power Drift = 0.013 dB
Peak SAR (extrapolated) = 0.043 W/kg
SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.030 mW/g
Maximum value of SAR (measured) = 0.039 mW/g

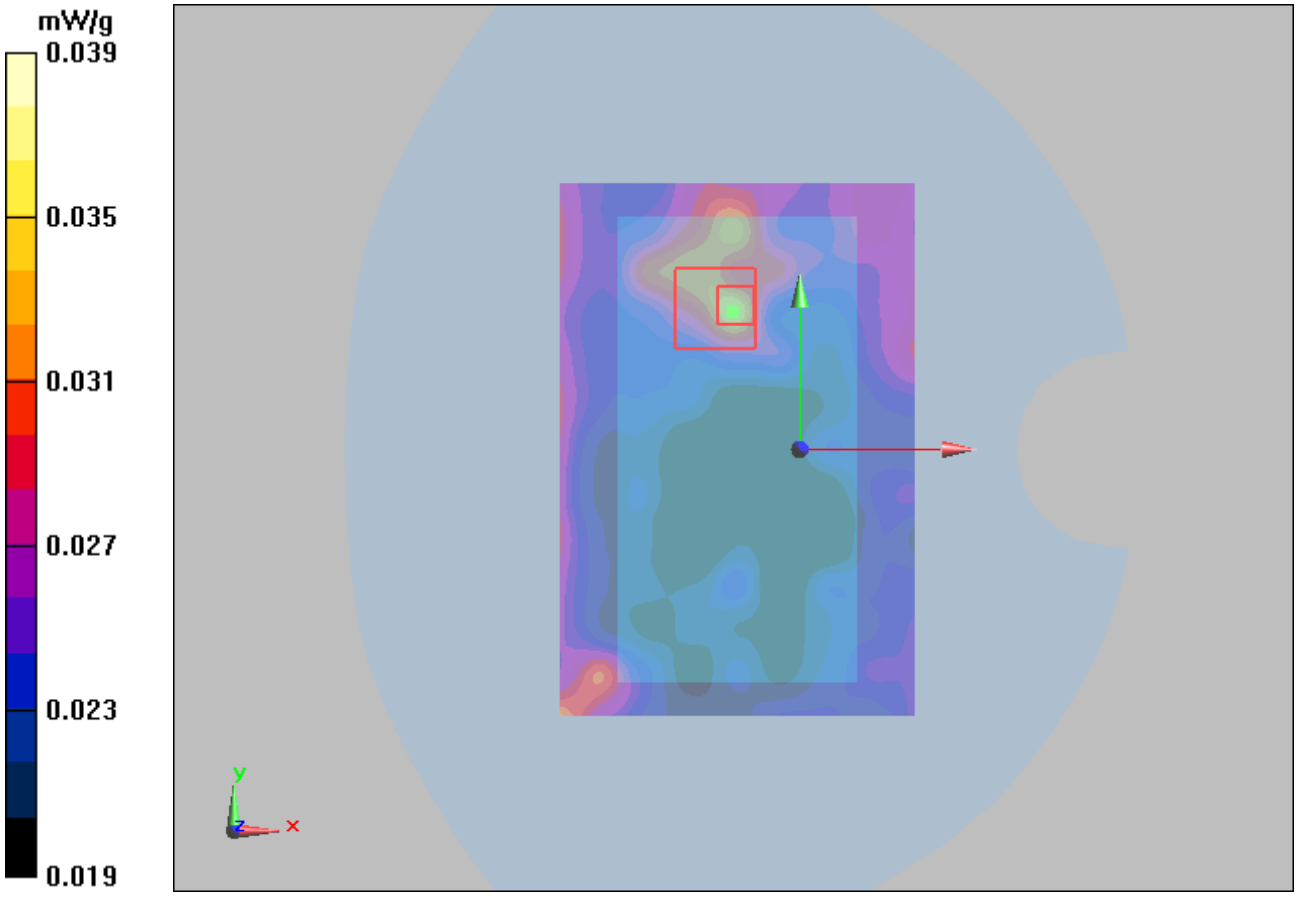


Figure 121 Body, Back Side, BT Channel 0

BT Front Side Low (Battery 1)

Date/Time: 3/11/2013 9:47:49 PM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.83 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Phantom Low/Area Scan (81x121x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.019 mW/g

Towards Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.5 V/m; Power Drift = 0.130 dB
Peak SAR (extrapolated) = 0.062 W/kg
SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.00956 mW/g
Maximum value of SAR (measured) = 0.015 mW/g

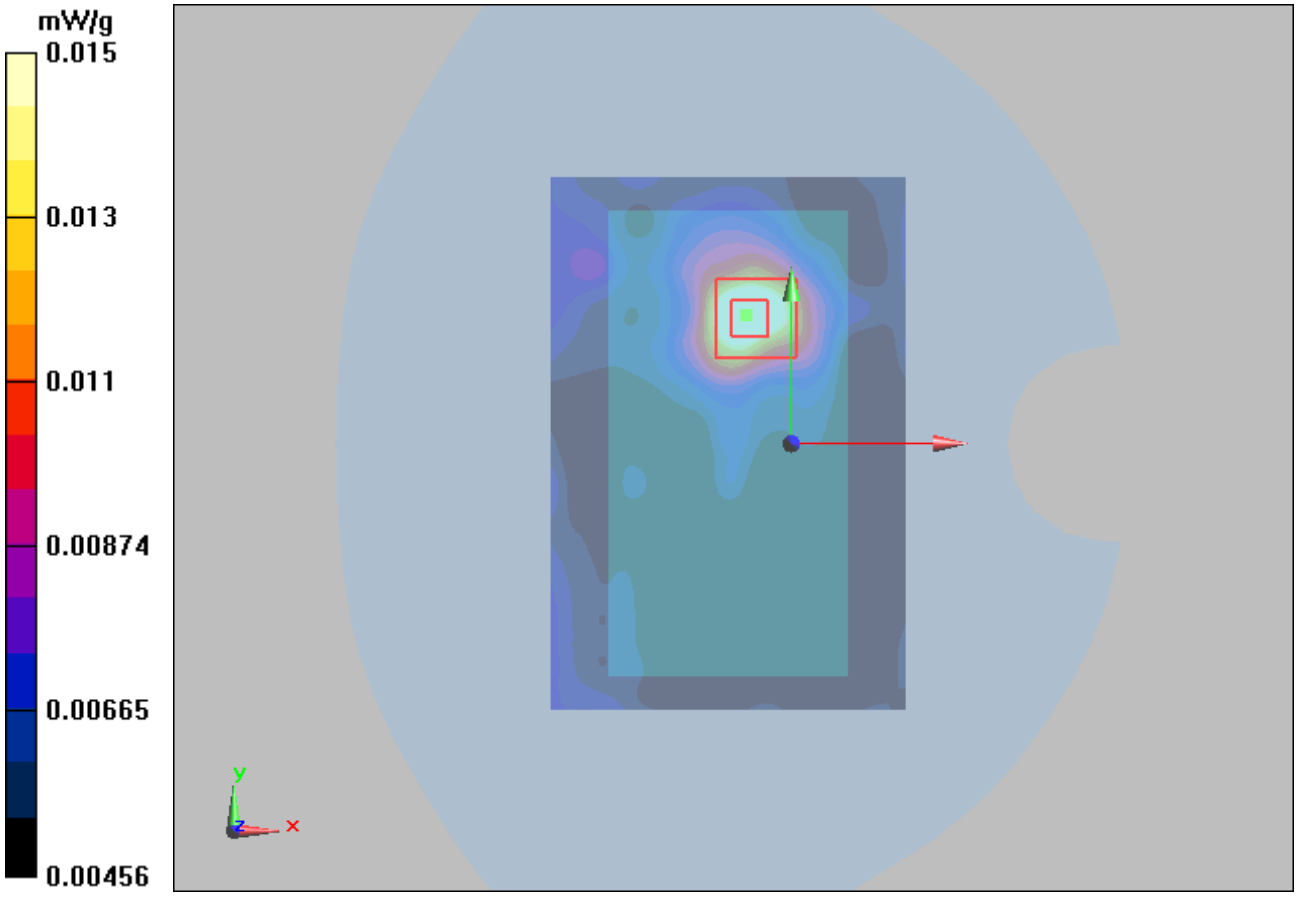


Figure 122 Body, Front Side, BT Channel 0

BT Back Side Low (Battery 2)

Date/Time: 3/11/2013 9:16:15 PM
Communication System: BT; Frequency: 2402 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2402 MHz; σ = 1.83 mho/m; ε_r = 51.8; ρ = 1000 kg/m^3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Flat Section
DASY5 Configuration:
Probe: ES3DV3 - SN3189; ConvF(3.96, 3.96, 3.96); Calibrated: 6/22/2012
Electronics: DAE4 Sn1317; Calibrated: 1/25/2013
Sensor-Surface: 4mm (Mechanical Surface Detection)
Phantom: SAM2; Type: SAM; Serial: TP-1524
Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 59

Towards Ground Low/Area Scan (81x121x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.036 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.19 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.037 W/kg
SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.032 mW/g
Maximum value of SAR (measured) = 0.037 mW/g

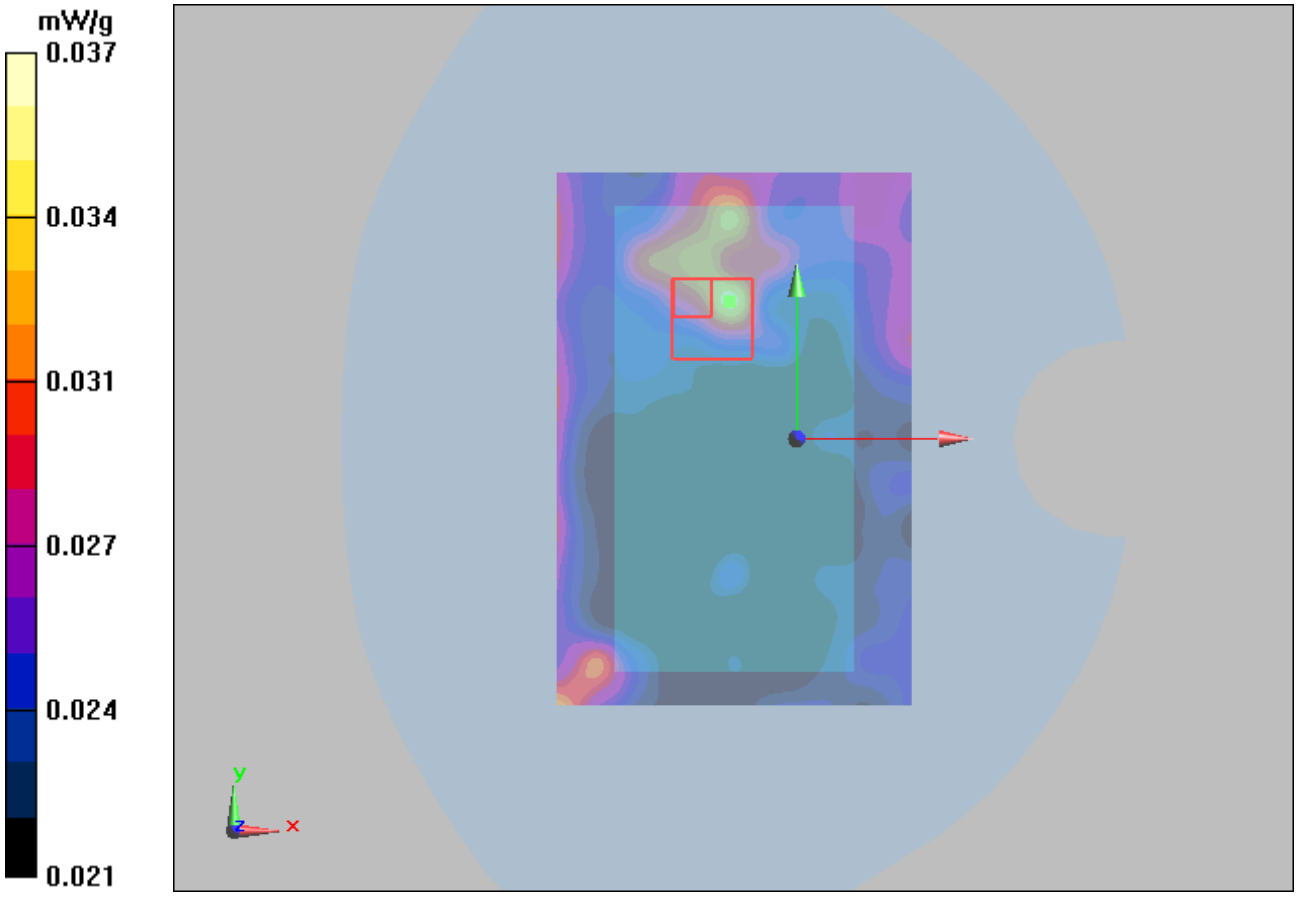


Figure 123 Body, Back Side, BT Channel 0

ANNEX D: Probe Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client TA-Shanghai (Auden)

Certificate No: ES3-3189_Jun12

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3189

Calibration procedure(s): QA CAL-01.v8, QA CAL-12.v7, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: June 22, 2012

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	29-Mar-12 (No. 217-01508)	Apr-13
Power sensor E4412A	MY41498087	29-Mar-12 (No. 217-01508)	Apr-13
Reference 3 dB Attenuator	SN: S5054 (3c)	27-Mar-12 (No. 217-01531)	Apr-13
Reference 20 dB Attenuator	SN: S5086 (20b)	27-Mar-12 (No. 217-01529)	Apr-13
Reference 30 dB Attenuator	SN: S5129 (30b)	27-Mar-12 (No. 217-01532)	Apr-13
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 660	10-Jan-12 (No. DAE4-660_Jan12)	Jan-13
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: June 22, 2012

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) Accreditation No.: **SCS 108**
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ES3DV3

SN:3189

Manufactured: March 25, 2008
Calibrated: June 22, 2012

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3189

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.32	1.35	1.05	± 10.1 %
DCP (mV)[B]	99.5	100.6	100.2	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc[E] (k=2)
0	CW	0.00	X	0.00	0.00	1.00	160.3	±3.8 %
			Y	0.00	0.00	1.00	164.9	
			Z	0.00	0.00	1.00	182.0	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3189

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
300	45.3	0.87	6.83	6.83	6.83	0.25	1.06	± 13.4 %
450	43.5	0.87	6.37	6.37	6.37	0.14	1.67	± 13.4 %
835	41.5	0.90	5.81	5.81	5.81	0.63	1.24	± 12.0 %
1750	40.1	1.37	4.90	4.90	4.90	0.80	1.14	± 12.0 %
1900	40.0	1.40	4.69	4.69	4.69	0.62	1.31	± 12.0 %
2450	39.2	1.80	4.14	4.14	4.14	0.65	1.36	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3189

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
300	58.2	0.92	6.53	6.53	6.53	0.23	1.90	± 13.4 %
450	56.7	0.94	6.73	6.73	6.73	0.10	1.00	± 13.4 %
835	55.2	0.97	5.81	5.81	5.81	0.54	1.33	± 12.0 %
1750	53.4	1.49	4.65	4.65	4.65	0.67	1.38	± 12.0 %
1900	53.3	1.52	4.36	4.36	4.36	0.62	1.40	± 12.0 %
2450	52.7	1.95	3.96	3.96	3.96	0.64	0.99	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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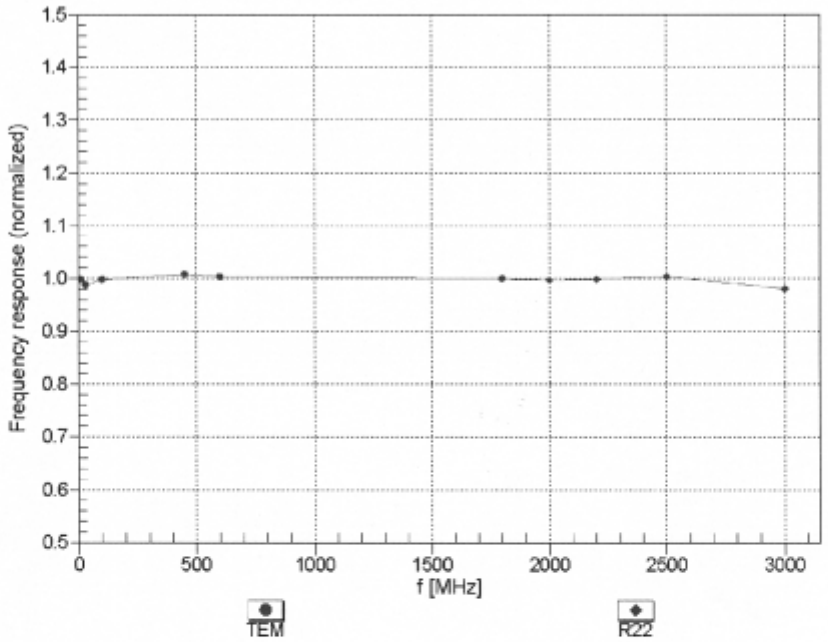
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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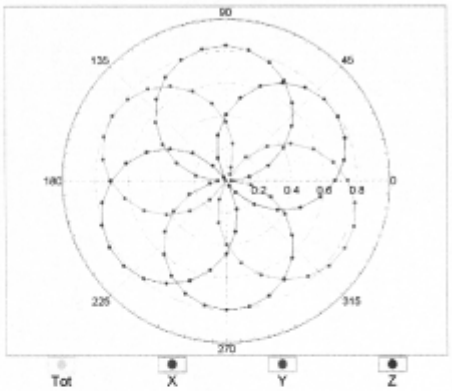
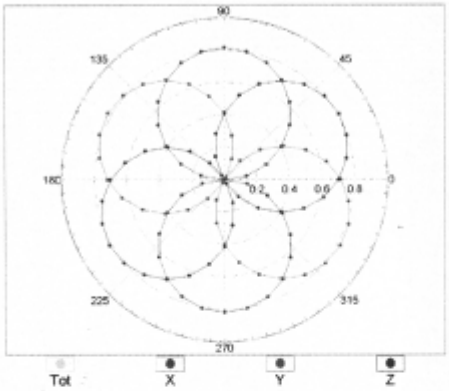
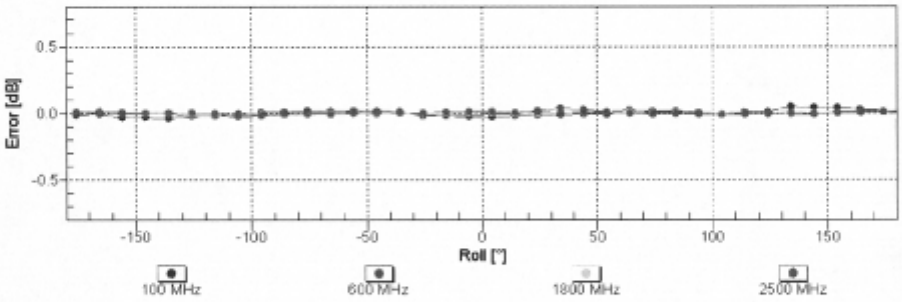
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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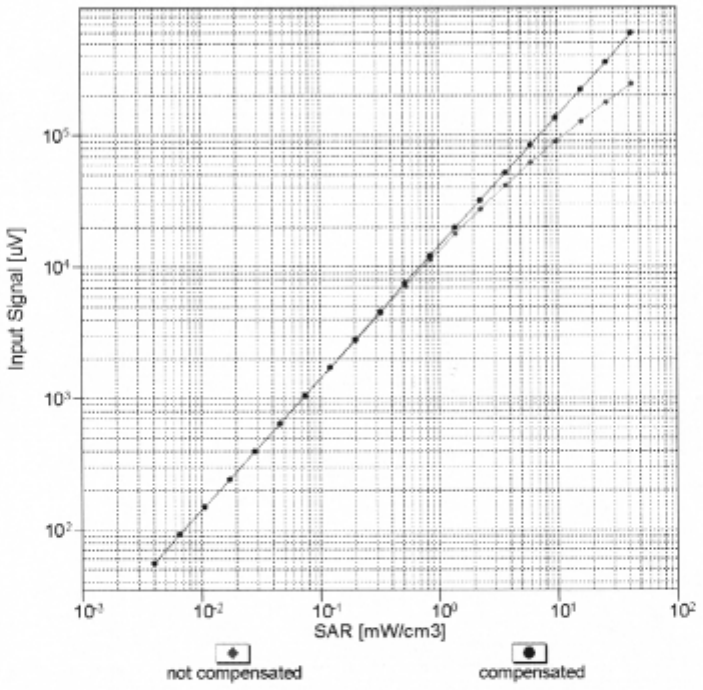
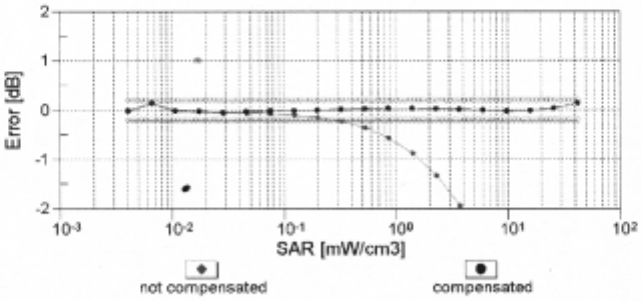
Dynamic Range f(SAR_{head})
(TEM cell , f = 900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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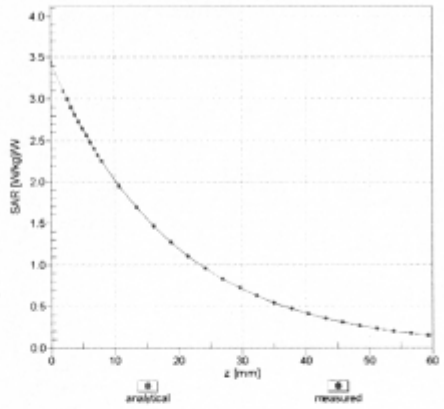
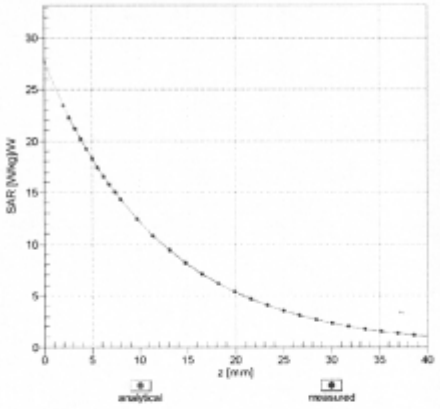
Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

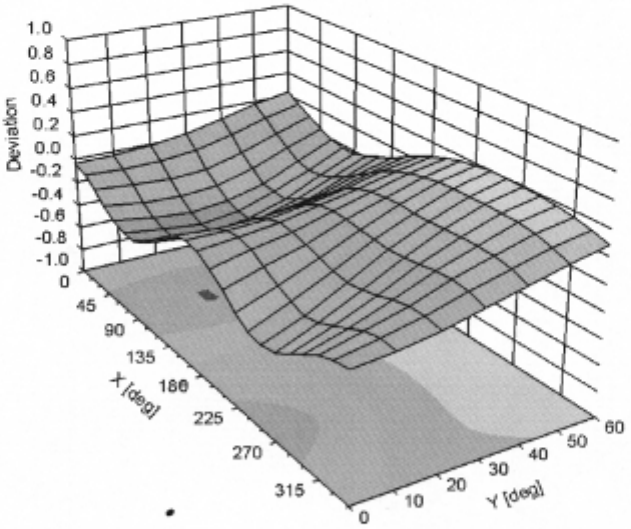


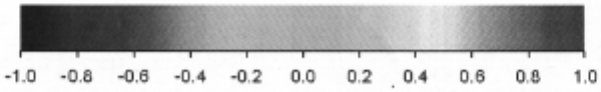
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3189

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	54.1
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm